STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL, GAS, AND MINING

FORM 3

APPLICATION FOR PERMIT TO DRILL

5. MINERAL LEASE NO: UTO-02025-ST	6. SURFACE: STATE
7. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A	
8. UNIT OF CA AGREEMENT NAME: RED WASH UNIT	
9. WELL NAME and NUMBER: RW 23-32BW	
10. FIELD AND POOL, OR WILDCAT: ~~RED WASH~~ Undesignated	
11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESW 32 7S 23E	
12. COUNTY: UINTAH	13. STATE: UTAH

1A. TYPE OF WORK: DRILL ☑ ☐ REENTER ☐ DEEPEN

B. TYPE OF WELL ☐ OIL ☑ GAS OTHER _____ ☑ SINGLE ZONE ☐ MULTIPLE ZONE

2. NAME OF OPERATOR: QUESTAR EXPLORATION & PRODUCTION, CO.

3. ADDRESS OF OPERATOR: 1571 E. 1700 S. CITY VERNAL STATE UT ZIP 84078 PHONE NUMBER: (435) 781-4032

4. LOCATION OF WELL (FOOTAGES) 640221X 40.164767
AT SURFACE: 2131' FSL 1751' FWL 4447134Y -109.353413
AT PROPOSED PRODUCING ZONE: SAME

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: 23 + \ - MILES FROM VERNAL, UT

15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE(FEET): 1751' + / -	16. NUMBER OF ACRES IN LEASE: 640	17. NUMBER OF ACRES ASSIGNED TO THIS WELL: 40
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET): 1690' +/-	19. PROPOSED DEPTH: 7705'	20. BOND DESCRIPTION: 965003033
21. ELEVATIONS (SHOW WHETHER DF, RT, GR,ETC.): 5380.7' GR	22. APPROXIMATE DATE WORK WILL START: ASAP	23. ESTIMATED DURATION: 10 DAYS

24 **PROPOSED CASING AND CEMENTING PROGRAM**

SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT			SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT
12 1/4"	9 5/8"	J-55	36 lb/ft (new) STC	450'	SEE 8-POINT DRILLING
7 7/8"	5 1/2"	J-55	15.5 lb (new) LTC	7000'	
7 7/8"	5 1/2"	J-55	17 lb (new) LTC	7705'	

25 **ATTACHMENTS**

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERATION GENERAL RULES:

☑ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER
☑ COMPLETE DRILLING PLAN
☑ EVIDNECE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER
☐ FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNI

NAME (PLEASE PRINT) Jan Nelson TITLE Regulatory Affairs

SIGNATURE Jan Nelson DATE 3/21/07

(This space for State use only)

API NUMBER ASSIGNED: 43-047-39182 APPROVAL: _____

(11/2001)

(See Instruction on Reverse Side)

RECEIVED
APR 03 2007
DIV. OF OIL, GAS & MINING

CONFIDENTIAL

ONSHORE OIL & GAS ORDER NO. 1
QUESTAR EXPLORATION & PRODUCTION, CO.
RW 23-32BW

DRILLING PROGRAM

ONSHORE OIL & GAS ORDER NO. 1
Approval of Operations on Onshore
Federal Oil and Gas Leases

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR 3100), Onshore Oil and Gas No. 1, and the approved plan of operations. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished the field representative to insure compliance.

1. Formation Tops

The estimated tops of important geologic markers are as follows:

Formation	Depth	Prod. Phase Anticipated
Uinta	Surface	
Green River	2800'	
Mahogany	3700'	
Wasatch	6205'	Oil / Gas
TD	7705'	

2. Anticipated Depths of Oil Gas Water and Other Mineral Bearing Zones

The estimated depths at which the top and bottom of the anticipated water, oil, gas. Or other mineral bearing formations are expected to be encountered are as follows:

Substance	Formation	Depth
Oil/Gas	Green River /Wasatch	7,705'

All fresh water and prospectively valuable minerals encountered during drilling will be recorded by depth and adequately protected. All oil and gas shows will be tested to determine commercial potential.

All water shows and water-bearing sands will be reported to the BLM in Vernal, Utah. Copies of State of Utah form OGC-8-X are acceptable. If no flows are detected, samples will be submitted to the BLM along with any water analyses conducted. Fresh water will be obtained from Wonsits Valley water right #36125 or Red Wash water right # 49-2153 to supply fresh water for drilling purposes.
All water resulting from drilling operations will be disposed of at Red Wash Central Battery Disposal Site; SWSE, Section 27, T7S, R23E or Wonsits Valley Disposal Site; SWNW, Section 12, T8S, R21E.

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DRILLING PROGRAM

3. Operator's Specification for Pressure Control Equipment:

A. 3,000 psi W.P. Double Gate BOP or Single Gate BOP (schematic attached)

B. Functional test daily

C. All casing strings shall be pressure tested (0.2 psi/foot or 1500 psi, (or 70% of burst whichever is greater) prior to drilling the plug after cementing; test pressure shall not exceed the internal yield pressure of the casing.

D. Ram type preventers and associated equipment shall be tested to approved stack working pressure if isolated by test plug or to 50 percent of internal yield pressure of casing whichever is less. BOP and related equipment shall meet the minimum requirements of Onshore Oil and Gas Order No. 2 for equipment and testing requirements, procedures, etc…, for a 3M system and individual components shall be operable as designed.

4. Casing Program

	Depth	Hole Size	Csg Size	Type	Weight
Surface	750'	12 1/4"	9 5/8"	J-55	36 lb/ft (new) ST&C
Prod.	7000'	7 7/8"	5 ½"	J-55	15.5 lb/ft (new) LT&C
TD	7705'	7 7/8"	5 ½"	J-55	17 lb/ft (new) LT&C

5. Auxiliary Equipment

A. Kelly Cock – yes

B. Float at the bit – no

C. Monitoring equipment on the mud system – visually and/or PVT/Flow Show

D. Full opening safety valve on the rig floor – yes

E. Rotating Head – yes
If drilling with air the following will be used:
The blooie line shall be at least 6" in diameter and extend at least 100' from the well bore into the reserve/blooie pit.

F. Blooie line ignition shall be provided by a continuous pilot (ignited when drilling below 500').

DRILLING PROGRAM

G. Compressor shall be tied directly to the blooie line through a manifold.

H. A mister with a continuous stream of water shall be installed near the end of the blooie lines for dust suppression.

Surface hole will be drilled with air, air/mist, foam, or mud depending on hole conditions. Drilling below surface casing will be with water based drilling fluids consisting primarily of fresh water, bentonite, lignite, caustic, lime, soda ash and polymers. No chromates will be used. It is not intended to use oil in the mud, however, in the event it is used, oil concentration will be less than 4% by volume. Maximum anticipated mud weight is 9.5 ppg.

No minimum quantity of weight material will be required to be kept on location.

PVT/Flow Show will be used from base of surface casing to TD.

Gas detector will be used from surface casing depth to TD.

6. Testing, logging and coring program

A. Cores – none anticipated

B. DST – none anticipated

Logging – Mud logging – 4500 to TD
GR-SP-Induction
Neutron Density
MRI

C. Formation and Completion Interval: Green River / Wasatch interval, final determination 0f completion will be made by analysis of logs.
Stimulation – Stimulation will be designed for the particular area of interest as encountered.

ONSHORE OIL & GAS ORDER NO. 1
QUESTAR EXPLORATION & PRODUCTION, CO.
RW 23-32BW

DRILLING PROGRAM

7. Cementing Program

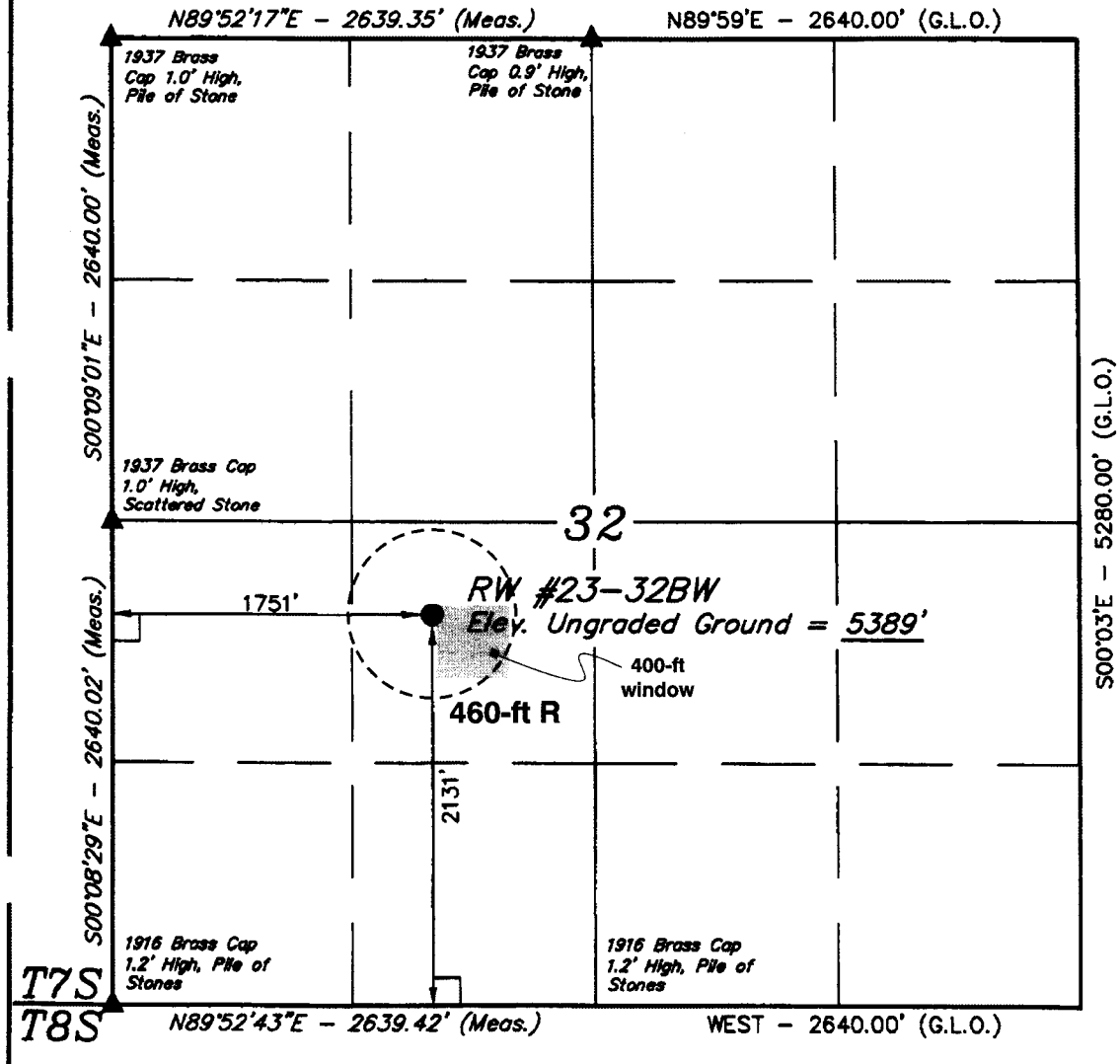
Casing	Volume	Type & Additives
Surface	428sx	Class "G" single slurry mixed to 15.6 ppg, yield = 1.19 cf/sx. Cement to surface with 428 cf (1541sx) calculated. Tail plug used. Allowed to set under pressure
Production	Lead-544sx* Tail-697sx*	Lead/Tail oilfield type cement circulated in place . Tail slurry: Class "G" + gilsonite and additives as required, mixed to 14.8 ppg, yield = 1.34 cf/sx. Tail to 5000' (±500' above production zone). Cement Characteristics: Lead slurry: Class "G" + extender and additives as required, mixed to 11.0 ppg, yield = 3.82 cf/sx. Lead to surface. Tail plug used. Allowed to set under pressure.

*Final cement volumes to be calculated from caliper log with an attempt to be made to circulate cement to the surface. A bond log will be run across the zone of interest and across zones as required by the authorized officer to insure protection of natural resources.

8. Anticipated Abnormal Pressures and Temperatures, Other Potential Hazards

No abnormal temperatures or pressures are anticipated. No H2S has been encountered in or known to exist from previous wells drilled to similar depths in the general area. Maximum anticipated bottom hole pressure equals approximately 3806.0 psi. Maximum anticipated bottom hole temperature is 140° F.

T7S, R23E, S.L.B.&M.



QUESTAR EXPLR. & PROD.

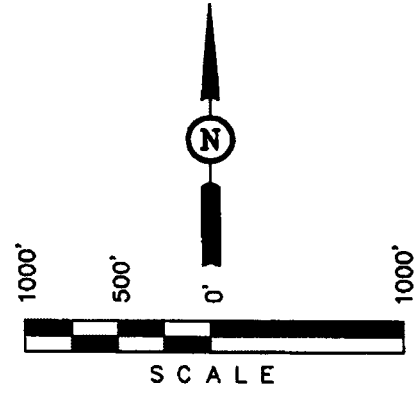
Well location, RW #23-32BW, located as shown in the NE 1/4 SW 1/4 of Section 32, T7S, R23E, S.L.B.&M. Uintah County, Utah.

BASIS OF ELEVATION

BENCH MARK (20EAM) LOCATED IN THE SE 1/4 OF SECTION 35, T8S, R21E, S.L.B.&M. TAKEN FROM THE OURAY SE QUADRANGLE, UTAH, UINTAH COUNTY, 7.5 MINUTE SERIES (TOPOGRAPHICAL MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 4697 FEET.

BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.



CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR REGISTRATION NO. 161319 STATE OF UTAH

LEGEND:

└ = 90° SYMBOL

● = PROPOSED WELL HEAD.

▲ = SECTION CORNERS LOCATED.

(NAD 83)
LATITUDE = 40°09'52.76" (40.164656)
LONGITUDE = 109°21'14.93" (109.354147)

(NAD 27)
LATITUDE = 40°09'52.89" (40.164692)
LONGITUDE = 109°21'12.47" (109.353464)

UINTAH ENGINEERING & LAND SURVEYING
85 SOUTH 200 EAST - VERNAL, UTAH 84078
(435) 789-1017

SCALE: 1" = 1000'	DATE SURVEYED: 01-19-07	DATE DRAWN: 01-22-07
PARTY: D.A. B.M. S.L.	REFERENCES: G.L.O. PLAT	
WEATHER: COLD	FILE: QUESTAR EXPLR. & PROD.	

Additional Operator Remarks

Questar Exploration & Production, Co. proposes to drill a well to 7705' to test the Wasatch. If productive, casing will be run and the well completed. If dry, the well will be plugged and abandoned as per BLM and State of Utah requirement.

See Onshore Order No. 1 attached

Please be advised that Questar Exploration & Production, Co. agrees to be responsible under the terms and conditions of the lease for the operations conducted upon the lease lands.

Bond coverage for this well is provided by Bond No. 965003033. The principal is Questar Exploration & Production, Co. via surety as consent as provided for the 43 CFR 3104.2.

ONSHORE OIL & GAS ORDER NO. 1
QUESTAR EXPLORATION & PRODUCTION, CO.
RW 23-32BW

DRILLING PROGRAM

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Surface	450'	12 1/4"	9 5/8"	J-55	36 lb/ft (new) ST&C
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DRILLING PROGRAM

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DRILLING PROGRAM

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3M BOP STACK

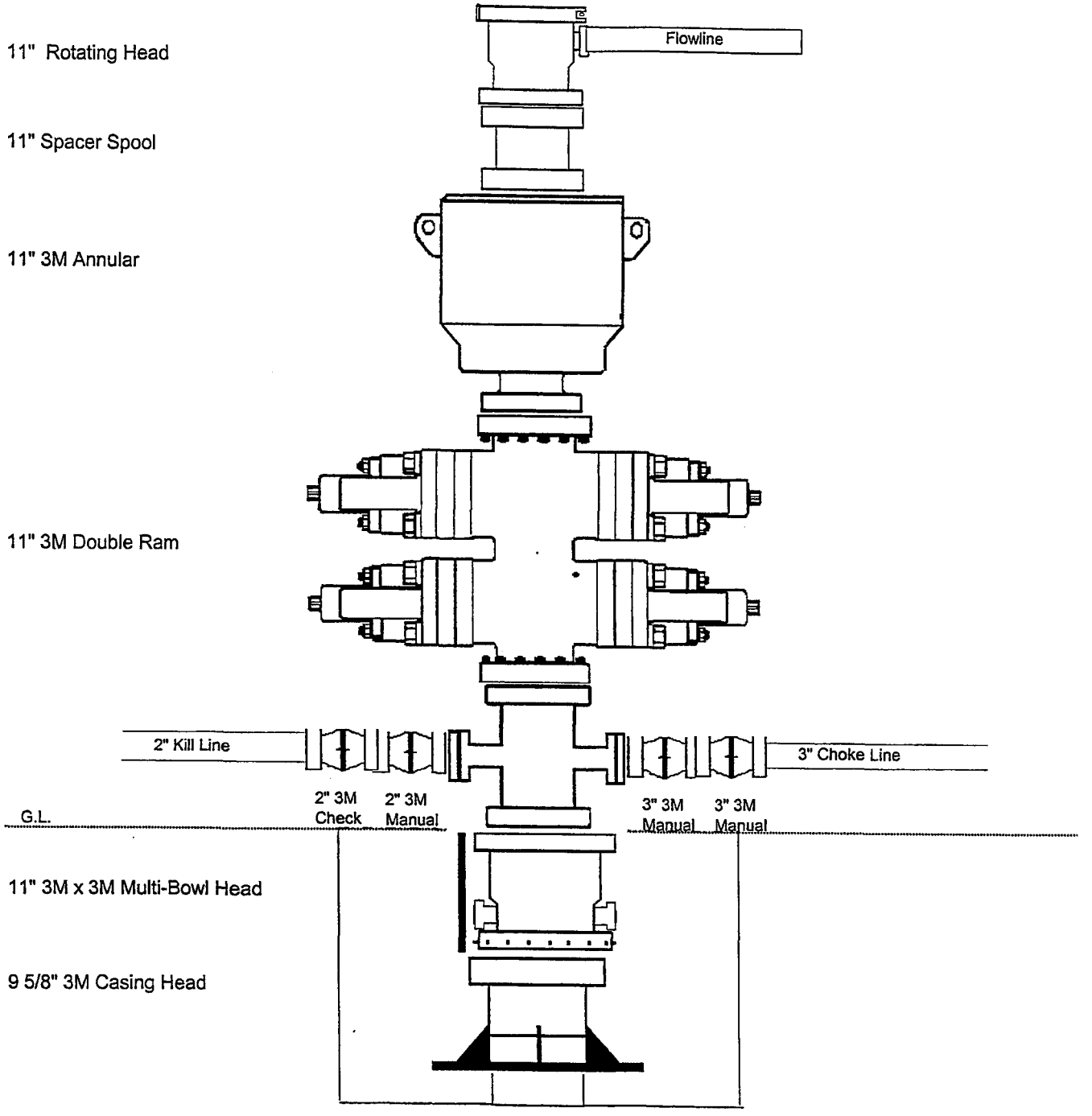
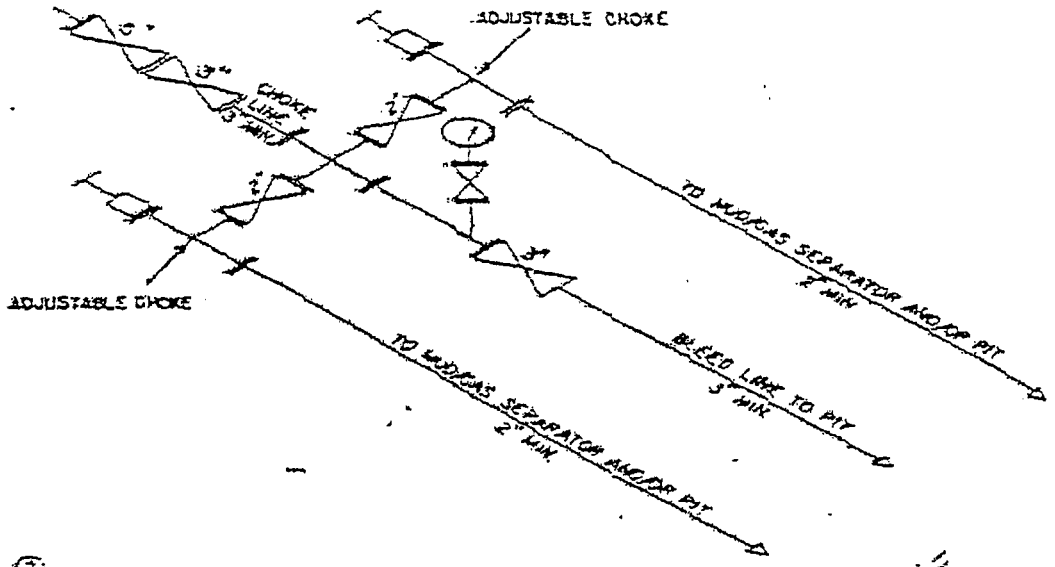

11" Rotating Head
11" Spacer Spool
11" 3M Annular
11" 3M Double Ram
11" 3M x 3M Multi-Bowl Head
9 5/8" 3M Casing Head
Flowline
2" Kill Line
3" Choke Line
2" 3M Check
2" 3M Manual
3" 3M Manual
3" 3M Manual
G.L.

EXHIBIT A CONTINUED



(1) 3M CHOKE MANIFOLD EQUIPMENT — CONFIGURATION OF CHOKES MAY VARY

Lessee's or Operator's Representative:

Jan Nelson
Red Wash Rep.
Questar Exploration & Production, Co,
11002 East 17500 South
Vernal, Utah 84078
(435) 781-4331

Certification:

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil & Gas Orders, the approved plan of operations, and any applicable Notice to Lessees.

Questar Exploration & Production, Co. fully responsible for the actions of their subcontractors.

A complete copy of the approved Application for Permit to Drill will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Questar Exploration & Production, Co. its' contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Jan Nelson
Red Wash Representative

21-Mar-07
Date

IPC # 07-19

Paleontological Reconnaissance Report

Questar Energy's Proposed Well Pads, Access Roads and Pipelines for "RW #21-32-BW & #23-32-BW" (Sec. 32, T 7 S, R 23 E)

Red Wash
Topographic Quadrangle
Uintah County, Utah

March 1, 2007

Prepared by Stephen D. Sandau
Paleontologist for
Intermountain Paleo-Consulting
P. O. Box 1125
Vernal, Utah 84078

INTRODUCTION

At the request of Jan Nelson of Questar Energy and authorized by James Kirkland of the Office of the State Paleontologist, a paleontological reconnaissance survey of "RW #21-32-BW & #23-32-BW" (Sec. 32, T 7 S, R 23 E) was conducted by Larry Trimble and Rush Harris on February 21, 2007. The survey was conducted under Utah Paleontological Investigations Permit #07-356. This survey to collect any paleontological materials discovered during the construction processes in danger of damage or destruction was done to meet requirements of the National Environmental Policy Act of 1969, and other State and Federal laws and regulations that protect paleontological resources.

FEDERAL AND STATE REQUIREMENTS

As mandated by the US Department of the Interior Bureau of Land Management, paleontologically sensitive geologic formations in BLM lands that are considered for exchange or may be impacted due to ground disturbance require paleontological evaluation. This requirement complies with:

1) The National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321.et. Seq., P.L. 91-190);
2) The Federal Land Policy and Management Act (FLPMA) of 1976 (90 Stat. 2743, 43 U.S.C. § 1701-1785, et. Seq., P.L. 94-579).
3) The National Historic Preservation Act.16 U.S.C. § 470-1, P.L. 102-575 in conjunction with 42 U.S.C. § 5320; and
4) The Utah Geological Survey. S. C. A.: 63-73-1. (1-21) and U.C.A.: 53B-17-603.

Under policy dictated by the BLM Manual and Handbook H-8270-1 (July, 1998) formations are ranked according to their paleontological potential:

- *Condition 1* is applied to those areas known to contain fossil localities, and special consideration of the known resources is in need of evaluation.

- *Condition 2* is applied to areas that have exposures of geologic rock units known to have produced fossils elsewhere.

- *Condition 3* is applied to areas unlikely to produce fossils based on surficial geology.

Although these guidelines apply mostly to vertebrate fossils, they are equally designed to help protect rare plant and invertebrate fossils and will be used here for State lands as well. It should be noted that many fossils, though common and unimpressive in and of themselves, can be important paleo-environmental, depositional, and chronostratigraphic indicators.

LOCATION

Questar Energy's "RW #21-32-BW & #23-32-BW" (Sec. 32, T 7 S, R 23 E) are located on lands managed by the State of Utah Trust Lands Administration (SITLA) in the Cottonwood and Sand Wash area, 5-6 miles southwest of the White River, and some 17 miles southeast of Ouray, Utah. The project area can be found on the Red Wash 7.5 minute U. S. Geological Survey Quadrangle Map, Uintah County, Utah.

PREVIOUS WORK

The basins of western North America have long produced some of the richest fossil collections in the world. Early Cenozoic sediments are especially well represented throughout the western interior. Paleontologists started field work in Utah's Uinta Basin as early as 1870 (Betts, 1871; Marsh, 1871, 1875a, 1875b). The Uinta Basin is located in the northeastern corner of Utah and covers approximately 31,000 sq. km (12,000 sq. miles) ranging in elevation from 1,465 to 2,130 m (4,800 to 7,000 ft) (Marsell, 1964; Hamblin et al., 1987). Middle to late Eocene time marked a period of dramatic change in the climate, flora, (Stucky, 1992) and fauna (Black and Dawson, 1966) of North America.

GEOLOGICAL AND PALEONTOLOGICAL OVERVIEW

Early in the geologic history of Utah, some 1,000 to 600 Ma, an east-west trending basin developed creating accommodation for 25,000 feet of siliclastics. Uplift of that filled-basin during the early Cenozoic formed the Uinta Mountains (Rasmussen et al., 1999). With the rise of the Uinta Mountains the asymmetrical synclinal Uinta Basin is thought to have formed through the effects of down warping in connection with the uplift. Throughout the Paleozoic and Mesozoic deposition fluctuated between marine and non-marine environments laying down a thick succession of sediments in the area now occupied by the Uinta Basin. Portions of these beds crop out on the margins of the basin due to tectonic events occurring during the late Mesozoic.

Early Tertiary Uinta Basin sediments were deposited in alternating lacustrine and fluvial environments. Large shallow lakes periodically covered most of the basin and surrounding areas during early to mid Eocene time (Abbott, 1957). These lacustrine sediments show up in the western part of the basin, dipping 2-3 degrees to the northeast and are lost in the subsurface on the east side. The increase of cross-bedded, coarse-grained sandstone and conglomerates preserved in paleo-channels indicates a transition to a fluvial environment toward the end of the epoch.

Four Eocene formations are recognized in the Uinta Basin: the Wasatch, Green River, Uinta and Duchesne River, respectively (Wood, 1941). The Uinta Formation is subdivided into two lithostratigraphic units namely: the Wagonhound Member (Wood, 1934), formerly known as Uinta A and B (Osborn, 1895, 1929) and the Myton Member previously regarded as the Uinta C.

Within the Uinta Basin in northeast Utah, the Uinta Formation in the western part of the basin is composed primarily of lacustrine sediments inter-fingering with over-bank deposits of silt and mudstone and westward flowing channel sands and fluvial clays, muds and sands in the east (Bryant et al, 1990; Ryder et al, 1976). Stratigraphic work done by early geologists and paleontologists within the Uinta Formation focused on the definition of rock units and attempted to define a distinction between early and late Uintan faunas (Riggs, 1912; Peterson and Kay, 1931; Kay 1934). More recent work focused on magnetostratigraphy, radioscopic chronology and continental biostratigraphy (Flynn, 1986; Prothero, 1996). Well known for its fossiliferous nature and distinctive mammalian fauna of mid-Eocene Age, the Uinta Formation is the type formation for the Uintan Land Mammal Age (Wood et al, 1941).

The Duchesne River Formation of the Uinta Basin in northeastern Utah is composed of a succession of fluvial and flood plain deposits composed of mud, silt and sandstone. The source area for these late Eocene deposits is from the Uinta Mountains indicated by paleocurrent data (Anderson and Picard, 1972). In Peterson's (1931c) paper, the name "Duchesne Formation" was applied to the formation and it was later changed to the "Duchesne River Formation" by Kay (1934). The formation is divided up into four members: the Brennan Basin, Dry Gulch Creek, LaPoint and Starr Flat (Anderson and Picard, 1972). Debates concerning the Duchesne River Formation, as to whether its age was late Eocene or early Oligocene, have surfaced throughout the literature of the last century (Wood et al., 1941; Scott 1945). Recent paleo-magnetostratigraphic work (Prothero, 1996) shows that the Duchesne River Formation is late Eocene in time.

FIELD METHODS

In order to determine if the proposed project area contained any paleontological resources, a reconnaissance survey was performed. An on-site observation of the proposed areas undergoing surficial disturbance is necessary because judgments made from topographic maps alone are often unreliable. Areas of low relief have potential to be erosional surfaces with the possibility of bearing fossil materials rather than surfaces covered by unconsolidated sediment or soils.

When found within the proposed construction areas, outcrops and erosional surfaces were checked to determine if fossils were present and to assess needs. Careful effort is made during surveys to identify and evaluate significant fossil materials or fossil horizons when they are found. Microvertebrates, although rare, are occasionally found in anthills or upon erosional surfaces and are of particular importance.

PROJECT AREA

The project area is situated in the Brennan Basin Member of the Duchesne River Formation. The following list provides a description of the individual wells and their associated pipelines and access roads.

RW-21-32-BW
The proposed access road and pipeline start in the NW/NW quarter-quarter section of Sec 32, T 7 S, R 23 E and travel to the north east for approximately 700' to the well pad which is located in the NE/NW quarter-quarter section of Sec. 32, T 7 S, R 23 E (Figure 1). The access road, pipeline and well pad are located on light red, pink and gray mudstone with interbeds of fine grained tan sandstone. The area is gypsipherous. No fossils were found.

RW-23-32-BW
The proposed access road and pipeline start in the SW/NE quarter-quarter section of Sec.32, T 7 S, R 23 E and travel to the southwest for approximately a quarter mile to the NE/SW quarter-quarter section of Sec. 32, T 7 S, R 23 E (Figure1). The access road, pipeline and well pad are located on light red, pink and gray mudstone with interbeds of fine grained, thin and medium bedded, tan sandstone. No fossils were found.

SURVEY RESULTS

PROJECT	GEOLOGY	PALEONTOLOGY
"RW-21-32-BW" (Sec. 32, T 7 S, R 23 E)	The access road, pipeline and well pad are located on light red, pink and gray mudstone with interbeds of fine grained tan sandstone. The area is gypsipherous.	No fossils were found. Condition 2
"RW-23-32-BW" (Sec. 32, T 7 S, R 23 E)	The access road, pipeline and well pad are located on light red, pink and gray mudstone with interbeds of fine grained, thin and medium bedded, tan sandstone.	No fossils were found. Condition 2

RECOMMENDATIONS

A reconnaissance survey was conducted for "RW #21-32-BW & #23-32-BW" (Sec. 32, T 7 S, R 23 E). The well pads, together with their associated access roads and pipelines covered in this report showed no signs of vertebrate fossils. Therefore, we recommend that no paleontological restrictions should be placed on the development of the projects included in this report.

Buried pipeline will encounter Uinta sediments along most of the staked pipeline corridors yet indications from surface fossils predict that little if any vertebrate fossils will be disturbed.

Nevertheless, if any vertebrate fossil(s) are found during construction within the project area, Operator (Lease Holder) will report all occurrences of paleontological resources discovered to a geologist with the Vernal Field Office of the BLM. The operator is responsible for informing all persons in the areas who are associated with this project of the requirements for protecting paleontological resources. Paleontological resources found on the public lands are recognized by the BLM as constituting a fragile and nonrenewable scientific record of the history of life on earth, and so represent an important and critical component of America's natural heritage. These resources are afforded protection under 43 CFR 3802 and 3809, and penalties possible for the collection of vertebrate fossils are under 43 CFR 8365.1-5.

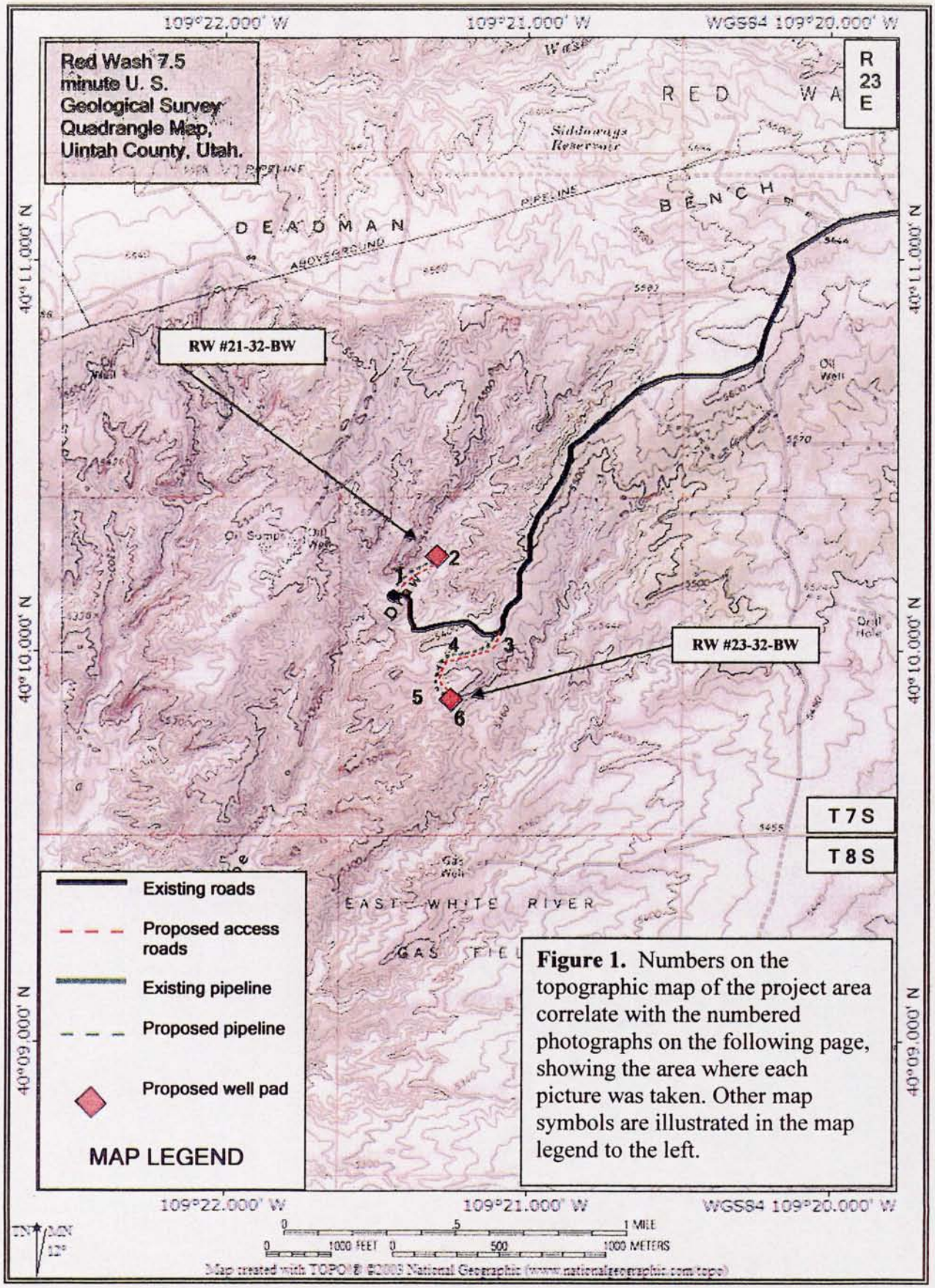
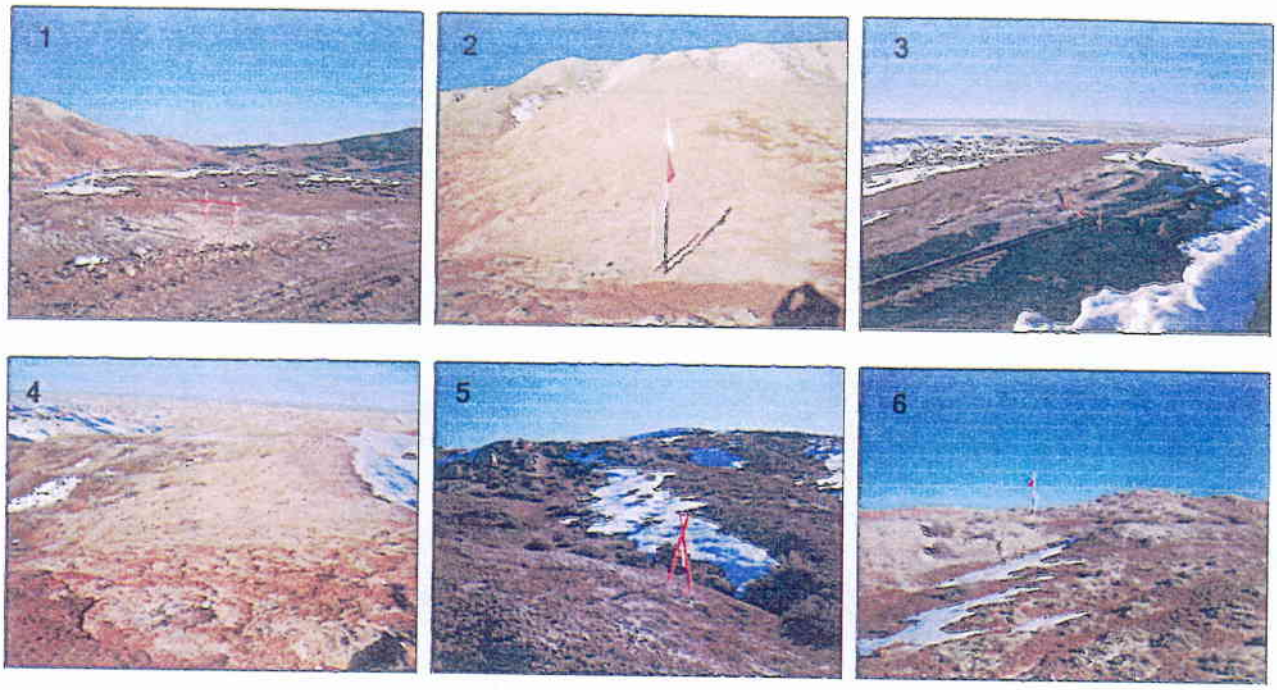


Figure 1. Numbers on the topographic map of the project area correlate with the numbered photographs on the following page, showing the area where each picture was taken. Other map symbols are illustrated in the map legend to the left.

Figure 1. *continued...*



REFERENCES CITED

Abbott, W., 1957, Tertiary of the Uinta Basin: Intermountain Assoc. Petroleum Geologists Guidebook, Eighth Ann. Field Conf., p. 102-109.

Anderson, D. W., and Picard, M. D., 1972, Stratigraphy of the Duchesne River Formation (Eocene-Oligocene?), northern Uinta Basin, northeastern Utah: Utah Geological and Mineralogical Survey Bulletin 97, p. 1-28.

Betts, C. W., 1871, The Yale College expedition of 1870: Harper's New Monthly Magazine, v. 43, p. 663-671.

Black, C. C. and Dawson, M. R., 1966, A Review of Late Eocene Mammalian Faunas from North America: American Journal of Science, v. 264, p. 321-349.

Bryant, B., Naeser C. W., Marvin R. F., Mahnert H. H., 1989, Cretaceous and Paleogene Sedimentary Rocks and Isotopic Ages of Paleogene Tuffs, Uinta basin, Utah. And Ages of Late Paleogene and Neogene Tuffs and the Beginning of Rapid Regional Extension, Eastern Boundary of the Basin and Range Province near Salt lake City, Utah: In: Evolution of Sedimentary basins-Uinta and Piceance Basins. U. S. Geological Survey Bulletin 1787-J, K.

Flynn, J. J., 1986, Correlation and geochronology of middle Eocene strata from the western United States: Palaeogeographic, Palaeoclimatology, Palaeoecology v, 55, p. 335-406.

Hamblin, A. H. and Miller, W. E., 1987, Paleogeography and Paleoecology of the Myton Pocket, Uinta Basin, Utah (Uinta Formation-Upper Eocene): Brigham Young University Geology Studies, vol. 34, p 33-60.

Kay, J. L., 1934, Tertiary formations of the Uinta Basin, Utah: Annals of Carnegie Museum, v. 23, p. 357-371.

Marsell, R. E., 1964, Geomorphology of the Uinta Basin-A Brief Sketch: Thirteenth Annual Field Conference. Association of Petroleum Geologists, p.34-46.

Marsh, O. C., 1871, On the geology of the Eastern Uintah Mountains: American Journal of Science and Arts, v. 1, p. 1-8.

_____ 1875a, Ancient lake basins of the Rocky Mountain region: American Journal of Science and Arts, v. 9, p. 49-52.

_____ 1875b, Notice of new Tertiary mammals, IV: American Journal of Science and Arts, Third Series, v. 9, p. 239-250.

Osborn, H. F., 1895, Fossil mammals of the Uinta beds, expedition of 1894: American Museum of Natural History Bulletin, v. 7, p. 71-106.

_____ 1929, The Titanotheres of Ancient Wyoming, Dakota and Nebraska: Monograph of the U. S. Geological Survey, v. 55, p. 1-953.

Peterson, O. A., 1931c, New species from the Oligocene of the Uinta: Annals of Carnegie Museum, v. 21, p. 61-78.

Peterson, O. A. and Kay, J. L., 1931, The Upper Uinta Formation of Northeastern Utah: Annals of the Carnegie Museum, v. 20, p. 293-306.

Prothero, D. R., 1996, Magnetic Stratigraphy and biostratigraphy of the middle Eocene Uinta Formation, Uinta Basin, Utah, *in* Prothero, D. R., and Emry, R. J. editors, The Terrestrial Eocene-Oligocene Transition in North America, p. 3-24.

Rasmussen, D. T., Conroy, G. C., Friscia, A. R., Townsend, K. E. and Kinkel, M. D., 1999, Mammals of the middle Eocene Uinta Formation: Vertebrate Paleontology of Utah, p. 401-420.

Riggs, E. S., 1912. New or Little Known Titanotheres from the Lower Uintah Formations: Field Museum of Natural History Geological Series, v, 159, p.17-41.

Ryder, R. T., Fouch, T. D., Elison, J. H., 1976, Early Tertiary sedimentation in the western Uinta Basin, Utah: Geological Society of America Bulletin v. 87, p. 496-512.

Scott, W. B., 1945, The Mammalia of the Duchesne River Oligocene: Transactions of the American Philosophical Society, v. 34, p. 209-253.

Stucky, R. K., 1992, Mammalian faunas in North America of Bridgerian to early Arikareean "age" (Eocene and Oligocene), in Prothero, D. R., and Berggren, W. A., eds., Eocene-Oligocene climatic and biotic evolution: Princeton University Press, p. 464-493.

Wood, H. E., 1934, Revision of the Hyrachyidaes: American Museum of Natural History Bulletin, v. 67, p. 181-295.

_____ and others, 1941, Nomenclature and Correlation of the North America Continental Tertiary: Geol. Soc. Amer. Bull., v. 52, no. 1, Jan. 1, p. 1-48.

QUESTAR EXPLR. & PROD.

RW #23-32BW

LOCATED IN UINTAH COUNTY, UTAH
SECTION 32, T7S, R23E, S.L.B.&M.

PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKE **CAMERA ANGLE: SOUTHWESTERLY**

PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS **CAMERA ANGLE: SOUTHERLY**

- Since 1964 -
Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
435-789-1017 uels@uelsinc.com

LOCATION PHOTOS	01 MONTH	19 DAY	07 YEAR	PHOTO
TAKEN BY: D.A.	DRAWN BY: C.P.	REVISED: 00-00-00		

QUESTAR EXPLR. & PROD.

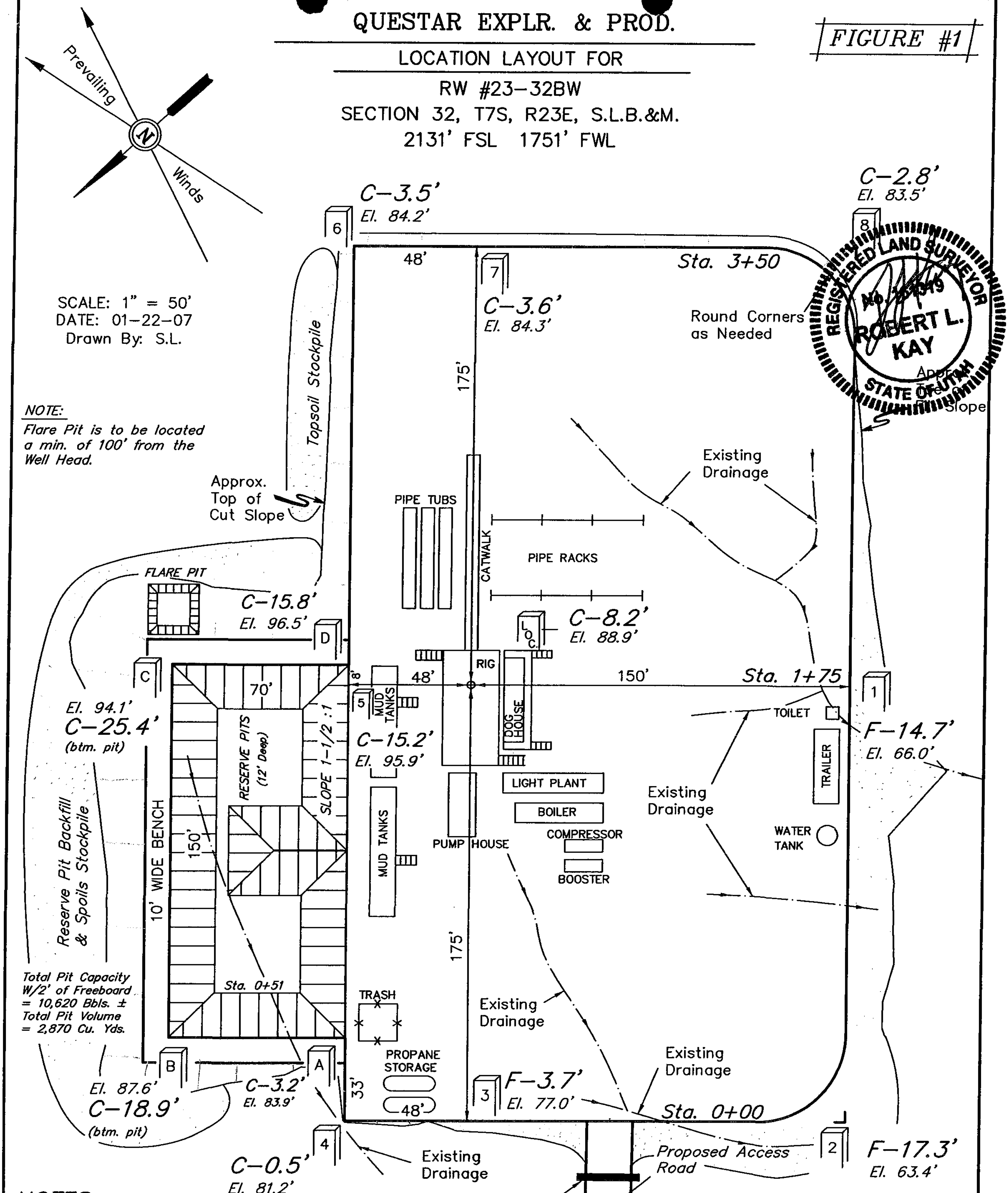
FIGURE #1

LOCATION LAYOUT FOR

RW #23-32BW

SECTION 32, T7S, R23E, S.L.B.&M.

2131' FSL 1751' FWL



NOTES:

Elev. Ungraded Ground At Loc. Stake = 5388.9'

FINISHED GRADE ELEV. AT LOC. STAKE = 5380.7'

UINTAH ENGINEERING & LAND SURVEYING

85 So. 200 East * Vernal, Utah 84078 * (435) 789-1017

REGISTERED LAND SURVEYOR No. 161319 ROBERT L. KAY STATE OF UTAH

QUESTAR EXPLR. & PROD.

TYPICAL CROSS SECTIONS FOR

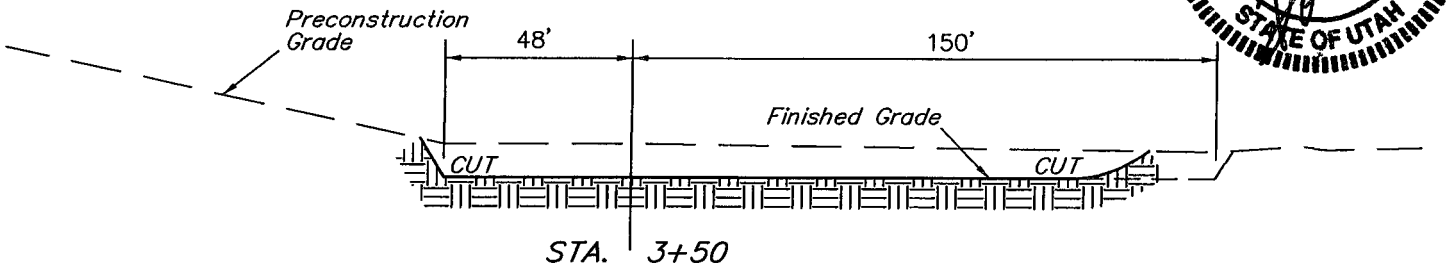
RW #23-32BW
SECTION 32, T7S, R23E, S.L.B.&M.
2131' FSL 1751' FWL

FIGURE #2

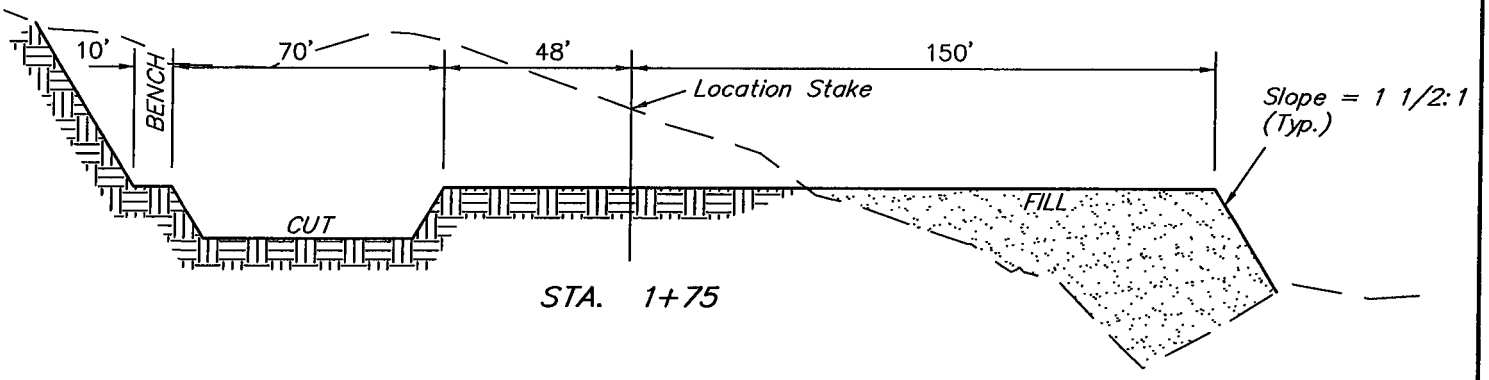
1" = 20'
X-Section Scale
1" = 50'

DATE: 01-22-07
Drawn By: S.L.

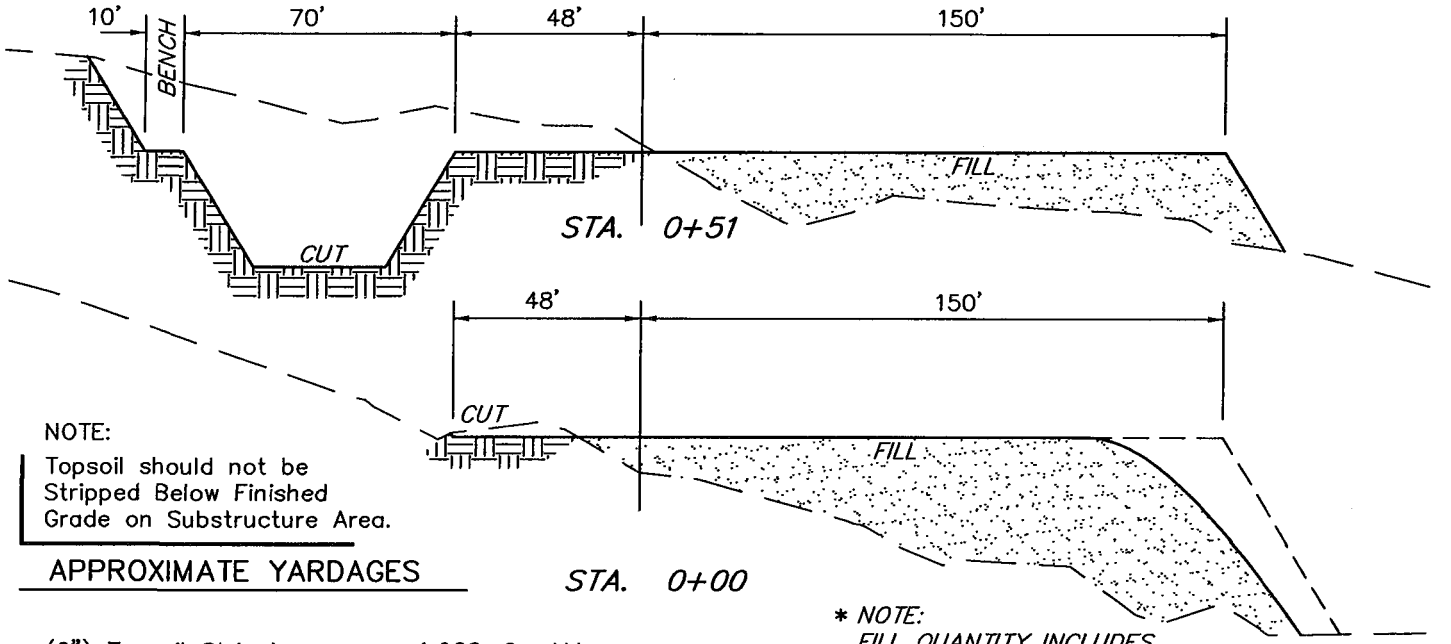
REGISTERED LAND SURVEYOR
No. 161319
ROBERT L. KAY
STATE OF UTAH



STA. 3+50



STA. 1+75



STA. 0+51

STA. 0+00

NOTE:
Topsoil should not be Stripped Below Finished Grade on Substructure Area.

APPROXIMATE YARDAGES

(6") Topsoil Stripping	=	1,900 Cu. Yds.
Remaining Location	=	12,340 Cu. Yds.
TOTAL CUT	=	14,240 CU.YDS.
FILL	=	10,900 CU.YDS.
Excess Material	=	3,340 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	=	3,340 Cu. Yds.
EXCESS UNBALANCE (After Interim Rehabilitation)	=	0 Cu. Yds.

* NOTE:
FILL QUANTITY INCLUDES 5% FOR COMPACTION

APPROXIMATE ACREAGES

WELL SITE DISTURBANCE = ±2.255 ACRES
ACCESS ROAD DISTURBANCE = ±1.273 ACRES
PIPELINE DISTURBANCE = ±1.145 ACRES

TOTAL = ±4.673 ACRES

UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East * Vernal, Utah 84078 * (435) 789-1017

QUESTAR EXPLR. & PROD.

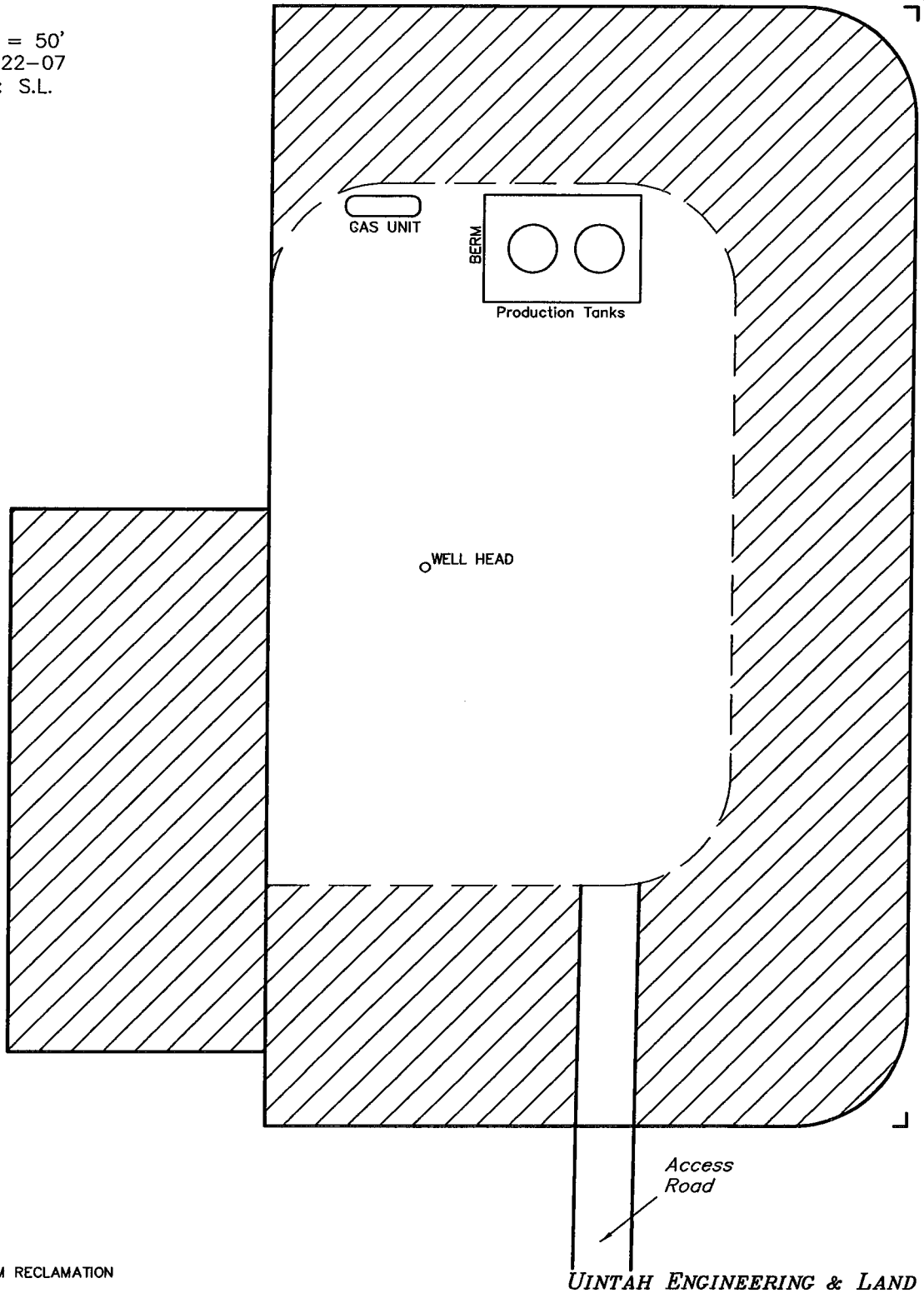
INTERIM RECLAMATION PLAN FOR

RW #23-32BW
SECTION 32, T7S, R23E, S.L.B.&M.
2131' FSL 1751' FWL

FIGURE #3

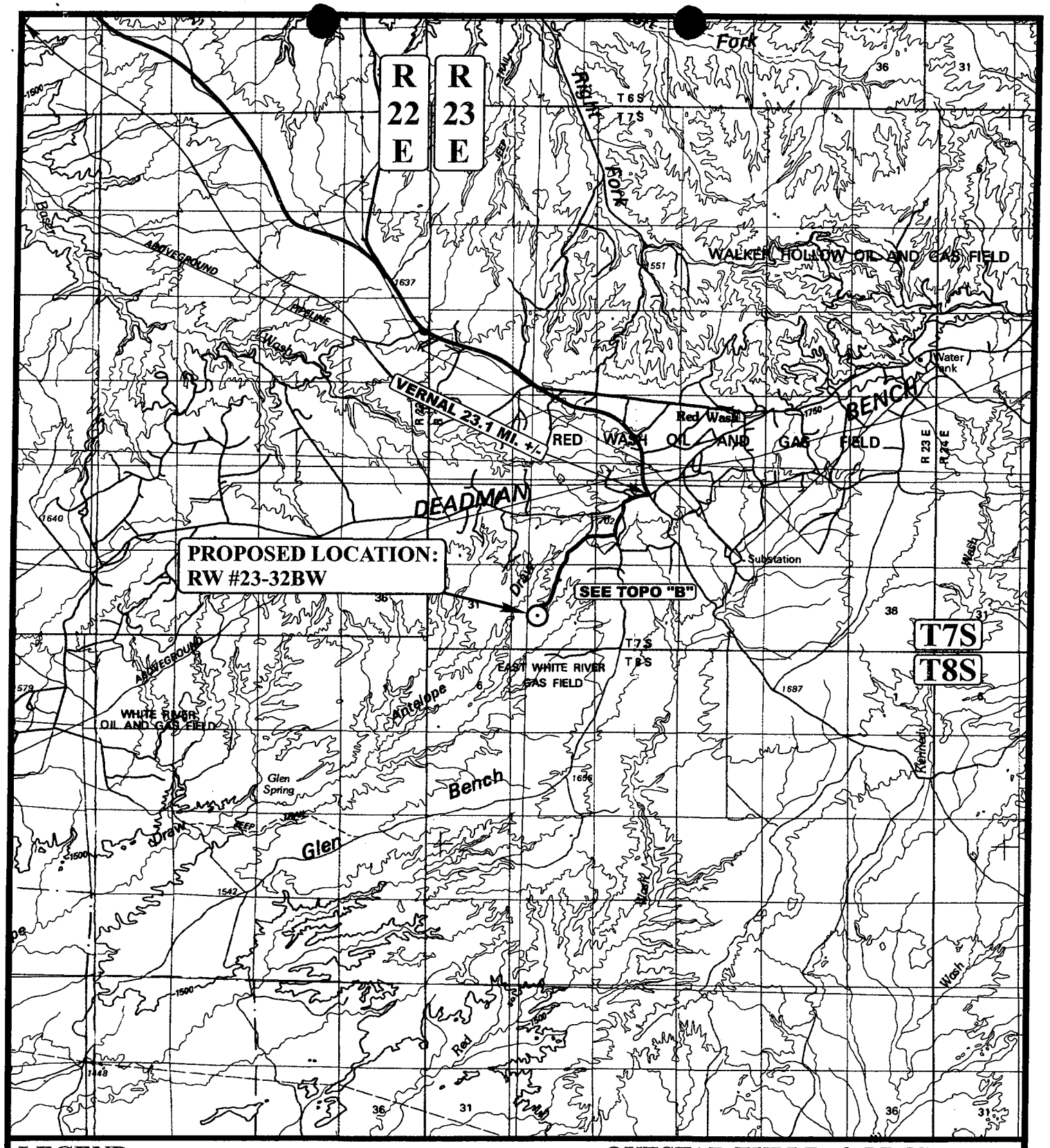
REGISTERED LAND SURVEYOR
No. 161319
ROBERT L. KAY
STATE OF UTAH

SCALE: 1" = 50'
DATE: 01-22-07
Drawn By: S.L.



INTERIM RECLAMATION

UINTAH ENGINEERING & LAND SURVEYING
*85 So. 200 East * Vernal, Utah 84078 * (435) 789-1017*



LEGEND:

⊙ PROPOSED LOCATION

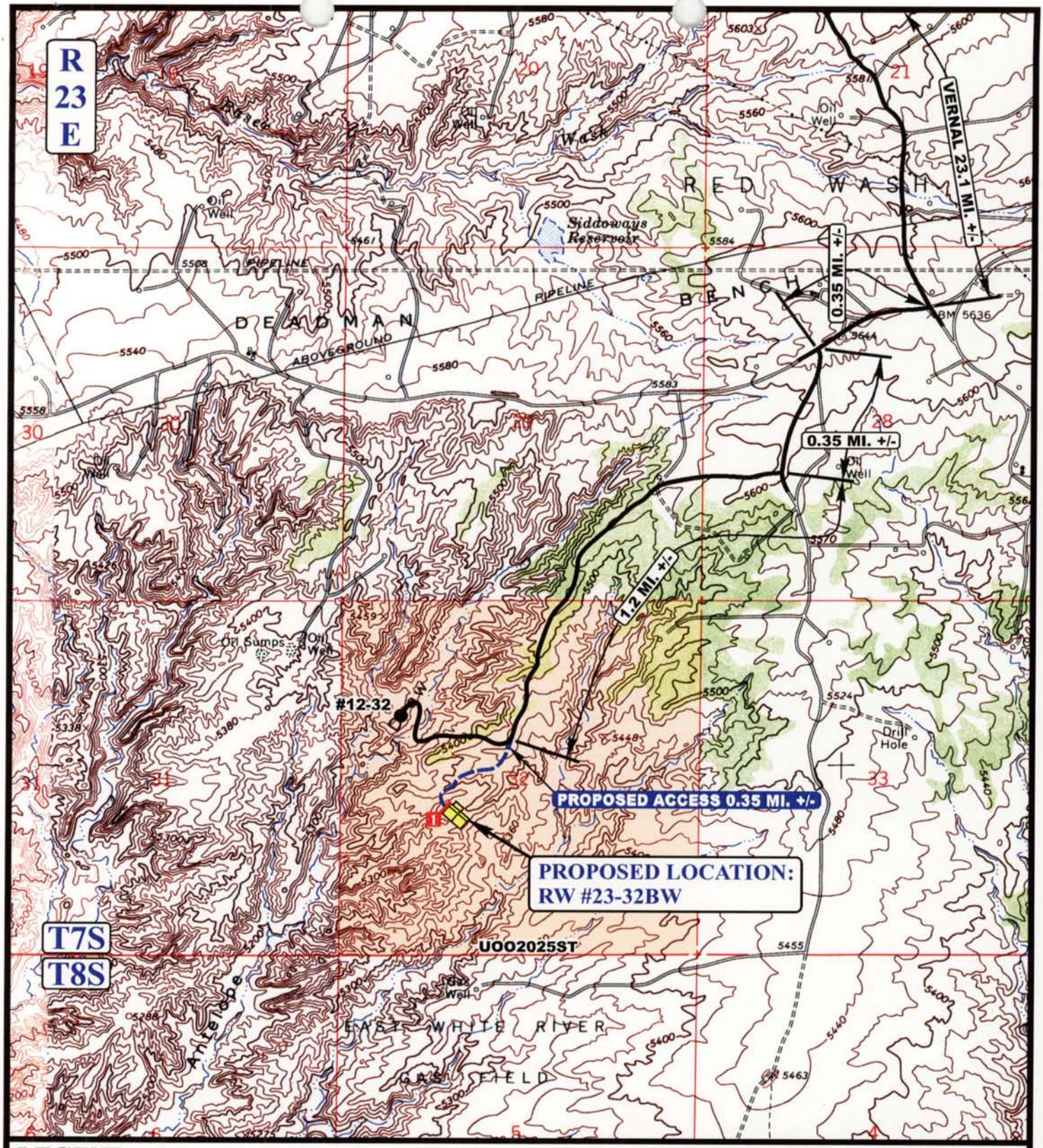
N

QUESTAR EXPLR. & PROD.

RW #23-32BW
SECTION 32, T7S, R23E, S.L.B.&M.
2131' FSL 1751' FWL

Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC MAP	01 MONTH	19 DAY	07 YEAR	A TOPO
SCALE: 1:100,000	DRAWN BY: C.P.	REVISED: 00-00-00		



LEGEND:

EXISTING ROAD

PROPOSED ACCESS ROAD

1 18" CMP REQUIRED

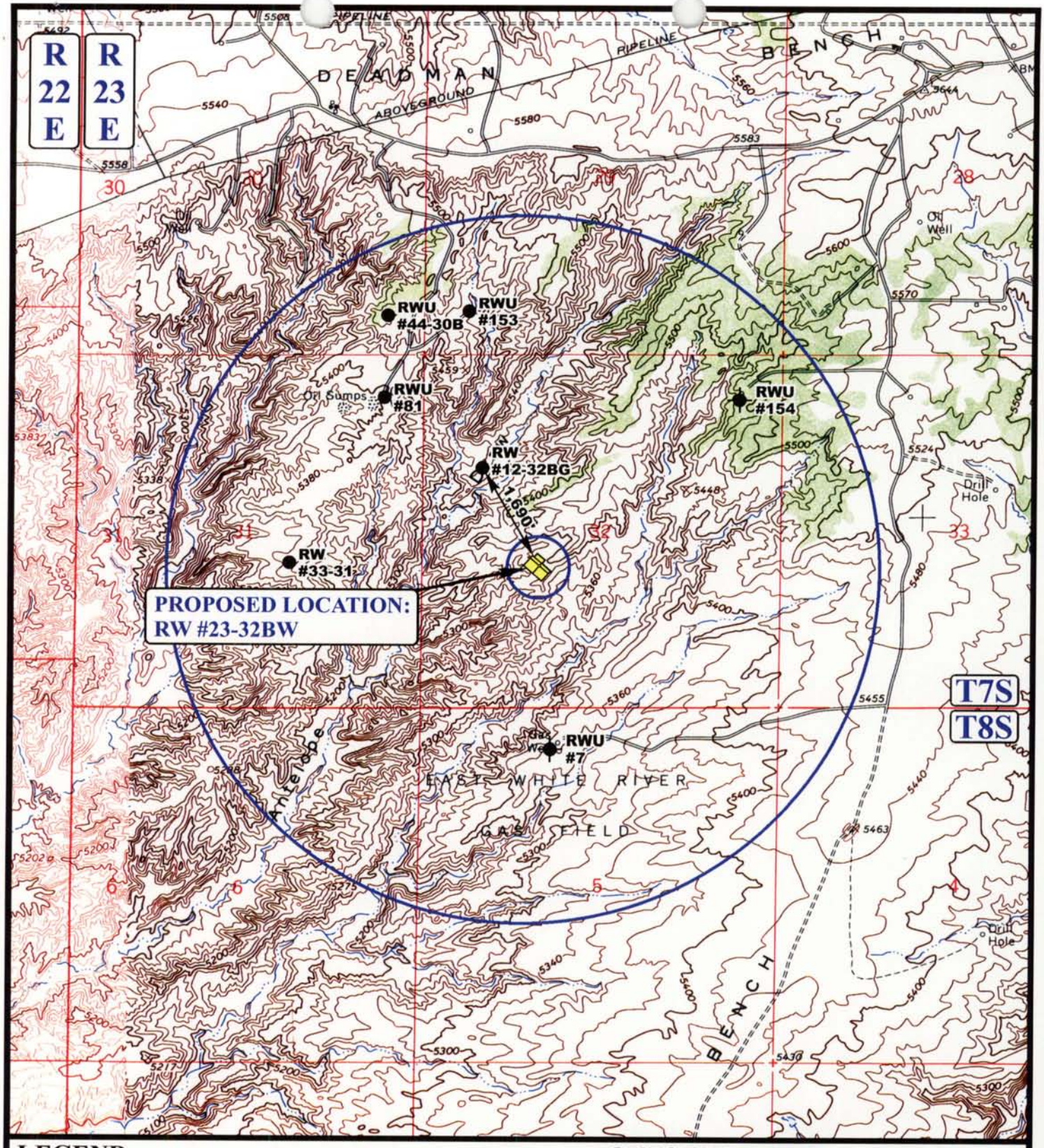
N

QUESTAR EXPLR. & PROD.

RW #23-32BW
SECTION 32, T7S, R23E, S.L.B.&M.
2131' FSL 1751' FWL

Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC MAP	01 MONTH	19 DAY	07 YEAR	B TOPO
SCALE: 1" = 2000'	DRAWN BY: C.P.	REVISED: 00-00-00		



LEGEND:

- DISPOSAL WELLS
- PRODUCING WELLS
- SHUT IN WELLS
- WATER WELLS
- ABANDONED WELLS
- TEMPORARILY ABANDONED

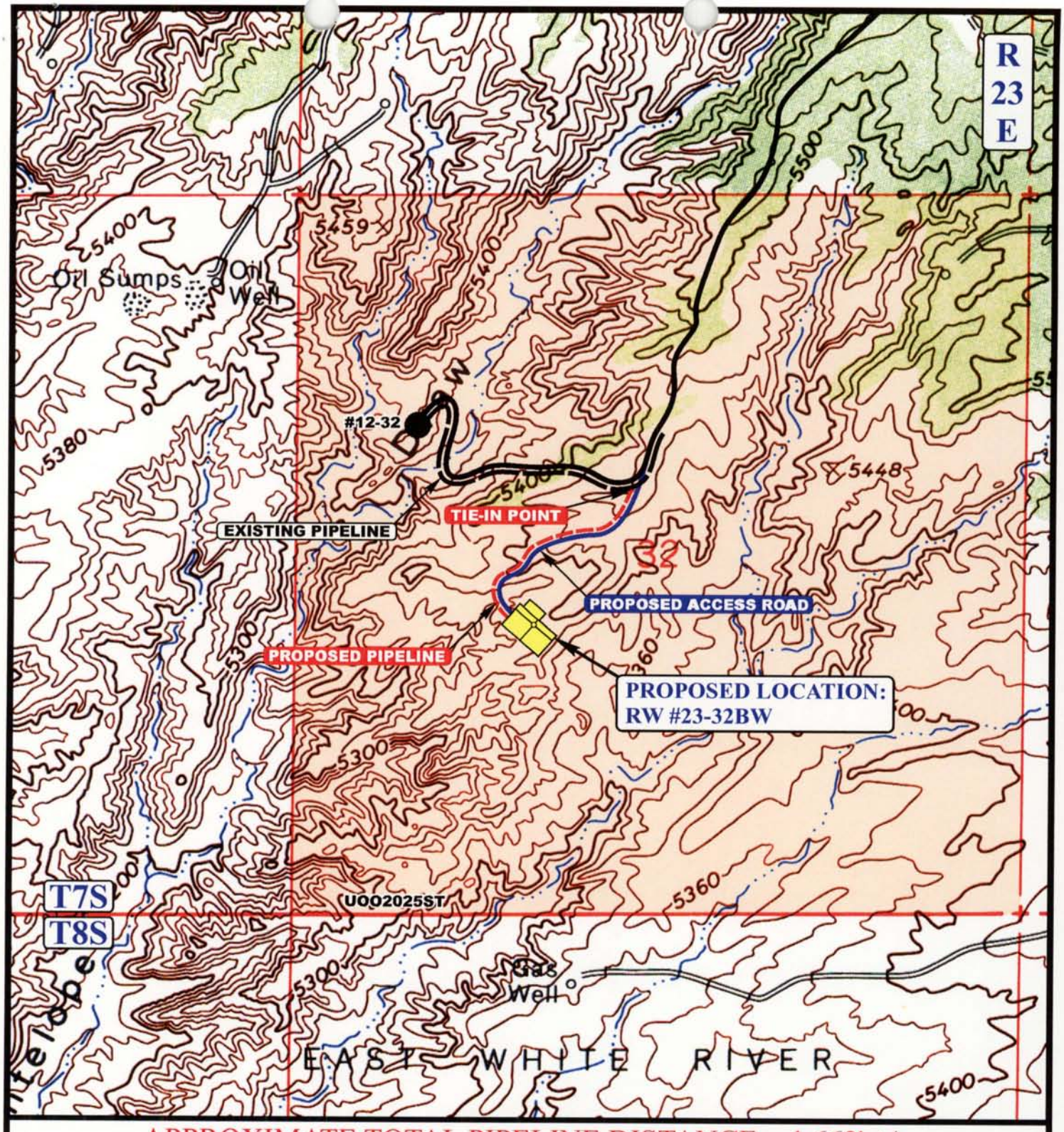
N

QUESTAR EXPLR. & PROD.

RW #23-32BW
SECTION 32, T7S, R23E, S.L.B.&M.
2131' FSL 1751' FWL

Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC MAP	01 MONTH	19 DAY	07 YEAR	C TOPO
SCALE: 1" = 2000'	DRAWN BY: C.P.	REVISED: 00-00-00		



APPROXIMATE TOTAL PIPELINE DISTANCE = 1,662' +/-

LEGEND:

PROPOSED ACCESS ROAD
EXISTING PIPELINE
PROPOSED PIPELINE

N

QUESTAR EXPLR. & PROD.

RW #23-32BW
SECTION 32, T7S, R23E, S.L.B.&M.
2131' FSL 1751' FWL

Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC MAP	01 MONTH	19 DAY	07 YEAR	D TOPO
SCALE: 1" = 1000'	DRAWN BY: C.P.	REVISED: 00-00-00		

CULTURAL RESOURCE INVENTORY
OF QUESTAR E&P's PROPOSED
WELL LOCATIONS RW #21-32 BW AND #23-32 BW
IN T 7S R 23E, SECTION 32,
UINTAH COUNTY, UTAH

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DIV. OF OIL, GAS & MINING

CULTURAL RESOURCE INVENTORY OF QUESTAR E&P's PROPOSED WELL LOCATIONS RW #21-32 BW AND #23-32 BW IN T 7S R 23E, SECTION 32, UINTAH COUNTY, UTAH

By:

Todd B. Seacat

Prepared For:

State of Utah
School and Institutional Trust Lands Administration

Prepared Under Contract With:

Questar E & P
11002 East 17500 North
Vernal, Utah 84078

Prepared By:

Montgomery Archaeological Consultants, Inc.
P.O. Box 219
Moab, Utah 84532

MOAC Report No. 07-40

March 23, 2007

United States Department of Interior (FLPMA)
Permit No. 06-UT-60122

State of Utah Antiquities Project (Survey)
Permit No. U-07-MQ-0236s

INTRODUCTION

A cultural resource inventory was conducted by Montgomery Archaeological Consultants, Inc. (MOAC) in March 2007 of Questar E&P's proposed RW #21-32 BW and #23-32 BW well locations with associated access/pipeline corridors. The project area is located on the north end of Antelope Draw in Uintah County, Utah. The survey was implemented at the request of Ms. Jan Nelson, Questar E&P, Vernal, Utah. A total of 30.8 acres was surveyed on lands administered by the State of Utah School and Institutional Trust Lands Administration (SITLA).

The objective of the inventory was to locate, document, and evaluate any cultural resources within the project area in order to comply with Section 106 of 36 CFR 800, the National Historic Preservation Act of 1966 (as amended). Also, the inventory was implemented to attain compliance with a number of federal and state mandates, including the National Environmental Policy Act of 1969, the Archaeological and Historic Conservation Act of 1972, the Archaeological Resources Protection Act of 1979, the American Indian Religious Freedom Act of 1978, and the Utah State Antiquities Act of 1973 (amended 1990).

The fieldwork was performed between March 1 and 12, 2007 by Todd Seacat (Field Supervisor) under the auspices of U.S.D.I. (FLPMA) Permit No. 06-UT-60122, State of Utah Antiquities Permit (Survey) No. U-07-MQ- 0236s issued to MOAC, Moab, Utah.

A file search for previous cultural resource inventories and archaeological sites was conducted by Keith Montgomery at the BLM Vernal Field Office on February 21, 2007. This consultation indicated that several surveys have been completed near the project area, although no previously documented archaeological sites occur in the immediate project area. In 1996, Senco Phenix inventoried the Red Wash Trust #259 and #260 well locations (Senulis 1996). A prehistoric lithic scatter (42Un2371) was documented in Township 7S, Range 23E, Section 16 consisting of five pieces of debitage and is evaluated as not eligible to the NRHP. In 2003, MOAC inventoried nine proposed well locations with associated access routes for Shenandoah Energy, Inc. resulting in the documentation of two historic sites (42Un3192 and 42Un3193) and two isolated finds of artifacts (Bond 2003). Neither of these sites were recommended eligible to the NRHP. Also in 2003, Questar's proposed well locations RWU #34-22C-7-24 and RWU #34-27C-7-24 were surveyed by MOAC resulting in negative results (Elkins 2003). In 2004, MOAC inventoried Questar's RW #14-34A, RW #34-27A, RW #32-27A, and RW #43-23A well locations with no cultural resources found (Montgomery and Shank 2004). In 2005, MOAC inventoried Questar's proposed wells RW#24-16BG, #31-16BG, and #32-16BG with no cultural resources found (Montgomery and Lower-Eskelson 2005). In 2006, MOAC inventoried Questar E&P's RW #12-32bg, Alt. #1 well location resulting in no cultural resources (Bond and Whitfield 2006).

DESCRIPTION OF THE PROJECT AREA

Questar E&P's proposed well locations RW #21-32 BW and #23-32 BW with associated access/pipeline corridors are located on the north end of Antelope Draw and south of Deadman Bench, in Uintah County, Utah. The legal description is the Section 32, Township 7 South, Range 23 East (Table 1, Figure 1).

Table 1. Questar E&P's Proposed RW Well Locations.

Well Designation	Legal Location	Access/Pipeline	Cultural Resources
RW #21-32 BW	T7S, R23E NE/NW Sec. 32	Access: 500 ft Pipeline: 600 ft	None
RW #23-32 BW	T7S, R23E NE/SW Sec. 32	Access: 1200 ft Pipeline: 1400 ft	None

Environment

The project area lies within the Uinta Basin physiographic unit, a distinctly bowl-shaped geologic structure (Stokes 1986:231). The entire Uinta Basin ecosystem is within the Green River drainage, considered to be the northernmost extension of the Colorado Plateau. In general, the project area falls within the Central Badlands District as defined by Clarke (1957), an area of broad erosional benches with extensive badlands rims along the drainages, which continue to dissect the benches. Specifically, the inventory area is situated on a small ridge in the bottom of Antelope Draw, south of a broad, flat mesa known as Deadman Bench. The project area is characterized by shale bedrock with residual surface sediments and alluvially redeposited sand. The sides of the canyon are comprised of steeply sloping shale capped with sandstone rims. The oldest formation present is the early Tertiary Uinta formation that is characterized by low, eroded hills of variegated red and gray claystone, mudstone, and shale. The Uinta formation is known for its fossil vertebrate turtles, crocodilians, fish, and mammals. In addition, old piedmont-slope deposits, most likely of Pleistocene age, mantle the upland ridge tops and benches.

The major water course in the study area is the drainage in Antelope Draw. The Green River is also located about 10 miles to the north. Elevation ranges between 5360 ft and 5400 ft asl. Vegetation in the project area includes juniper, saltbush, sagebrush, greasewood, prickly pear cactus, and bunch grasses. Modern disturbances include livestock grazing, modern trash, roads, and oil/gas development.

SURVEY METHODOLOGY

An intensive pedestrian survey was performed for this project which is considered 100% coverage. At each proposed well location, a 10 acre square parcel was defined, centered on the well pad center stake. The interior of the well location was examined for cultural resources by the archaeologist walking parallel transects spaced no more than 10 m (33 ft) apart. The access/pipeline corridor was surveyed to a width of 61 m (200 ft). Ground visibility was considered good. A total of 30.8 acres was inventoried for cultural resources on SITLA land.

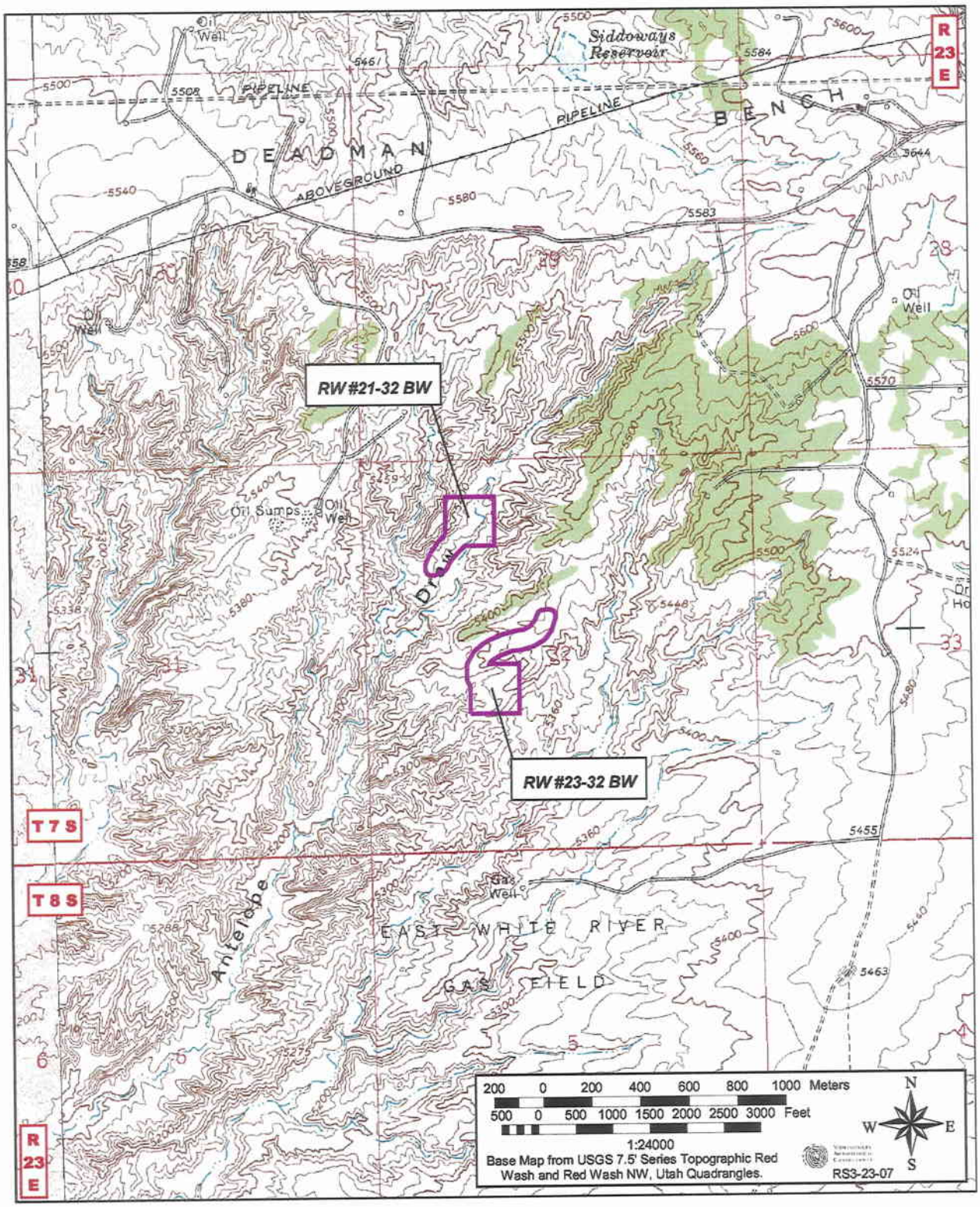

Figure 1. Inventory Area of Questar E&P's Proposed RW #21-32 BW and #23-32 BW Well Locations with Access and Pipeline Corridors, Uintah County, Utah.

RESULTS AND RECOMMENDATIONS

The inventory of Questar E&P's proposed RW #21-32 BW and #23-32 BW well locations with access/pipeline corridor resulted in no new or previously recorded cultural resources. Based on the findings, a determination of "no historic properties affected" is recommended for the project pursuant to Section 106, CFR 800.

REFERENCES CITED

Bond, M.
2003 Cultural Resource Inventory of Shenandoah Energy's Nine Proposed Well Locations With Associated Access Routes on Deadman Bench, Uintah County, Utah. Montgomery Archaeological Consultants, Moab, Utah. Report No. U-03-MQ-0293b.

Bond, M., and A. Whitfield
2006 Cultural Resource Inventory of Questar E & P's Proposed Well Location RW #12-32BG Alt. #1, Uintah County, Utah. Montgomery Archaeological Consultants, Moab, Utah. Report No. U-063-MQ-0250b,s.

Clarke, J.
1957 Geomorphology of the Uintah Basin. In *Guidebook to the Geology of the Uintah Basin*, edited by O.G. Seal.

Elkins, M.
2003 Cultural Resource Inventory of Questar's RWU #34-22C-7-24 Pipeline and RWC #34-27C-7-24 Pipeline, Uintah County, Utah. Montgomery Archaeological Consultants, Moab, Utah. Report U-03-MQ-0741b.

Montgomery, K. R. and D. Shank
2004 Cultural Resource Inventory of Questar's RW #14-34A, RW #34-27A, RW #32-27A, and RW #43-23A Wells on Deadman Bench, Uintah County, Utah. Montgomery Archaeological Consultants, Moab, Utah. Report U-04-MQ-0280b.

Montgomery, K. R. and K. Lower-Eskelson
2005 Cultural Resource Inventory of Questar's Proposed RW #21-26AG, RW #41-26AG, and RW #43-26AG Wells On Deadman Bench, Uintah County, Utah. Montgomery Archaeological Consultants, Moab, Utah. Report U-05-MQ-0205b.

Senulis, J.
1996 Cultural Resource Inventory of Red Wash Trust #259 and #260 Well Locations for Chevron U.S.A., Inc., Uintah County, Utah. Senco-Phenix, Report No. U-96-SC-0551s.

Stokes, W.L.
1986 Geology of Utah. Utah Museum of Natural History and Utah Geological and Mineral Survey, Salt Lake City, Utah.

QUESTAR

Questar Exploration and Production Company
11002 East 17500 South
Vernal, UT 84078

March 21, 2007

Division of Oil, Gas & Mining
1594 W. N. Temple STE 1210
Salt Lake City, UT 84114-5801

To Whom It May Concern:

In reference to the State Oil and Gas Conservation rule R649-3-3 Questar Exploration & Production, Co. RW 23-32BW is an exception to this rule due to topography.

There are no additional lease owners within 460' of the proposed location. If you have any question please contact Jan Nelson @ (435) 781-4032.

Thank you,

Jan Nelson
Regulatory Affairs

RECEIVED
APR 0 3 2007
DIV. OF OIL, GAS & MINING

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 04/03/2007

API NO. ASSIGNED: 43-047-39182

WELL NAME: RW 23-32BW

OPERATOR: QUESTAR EXPLORATION & (N5085)

PHONE NUMBER: 435-781-4032

CONTACT: JAN NELSON

PROPOSED LOCATION:

NESW 32 070S 230E

SURFACE: 2131 FSL 1751 FWL

BOTTOM: 2131 FSL 1751 FWL

COUNTY: UINTAH

LATITUDE: 40.16477 LONGITUDE: -109.3534

UTM SURF EASTINGS: 640221 NORTHINGS: 4447134

FIELD NAME: UNDESIGNATED (2)

INSPECT LOCATN BY: / /		
Tech Review	**Initials**	**Date**
Engineering	DKD	5/16/07
Geology		
Surface		

LEASE TYPE: 3 - State

LEASE NUMBER: UTO-02025-ST

PROPOSED FORMATION: WSTC

SURFACE OWNER: 3 - State

COALBED METHANE WELL? NO

RECEIVED AND/OR REVIEWED:

✓ Plat

✓ Bond: Fed[] Ind[] Sta[] Fee[]
(No. 4656033)

✓ Potash (Y/N)

N Oil Shale 190-5 (B) or 190-3 or 190-13

✓ Water Permit
(No. 49-2153)

✓ RDCC Review (Y/N)
(Date:)

NA Fee Surf Agreement (Y/N)

NA Intent to Commingle (Y/N)

LOCATION AND SITING:

___ R649-2-3.

Unit: RED WASH

___ R649-2-2. General

Siting: 460 From Qtr/Qtr & 920' Between Wells

___ R649-3-3. Exception

✓ Drilling Unit

Board Cause No: 187-07

Eff Date: 9-18-2001

Siting: Suspends General Siting

___ R649-3-11. Directional Drill

COMMENTS: Needs Permit (04-24-07)

STIPULATIONS: 1- STATEMENT OF BASIS

OPERATOR: QUESTAR EXPL & PROD (N5085)

SEC: 32 T.7S R. 23E

FIELD: UNDESIGNATED (002)

COUNTY: UINTAH

CAUSE: 187-7 / 9-18-2001

Field Status
- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- PROPOSED
- STORAGE
- TERMINATED

Unit Status
- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PENDING
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

Wells Status
- GAS INJECTION
- GAS STORAGE
- LOCATION ABANDONED
- NEW LOCATION
- PLUGGED & ABANDONED
- PRODUCING GAS
- PRODUCING OIL
- SHUT-IN GAS
- SHUT-IN OIL
- TEMP. ABANDONED
- TEST WELL
- WATER INJECTION
- WATER SUPPLY
- WATER DISPOSAL
- DRILLING

Utah Oil Gas and Mining

N
W E
S

PREPARED BY: DIANA MASON
DATE: 04-APRIL-2007

Application for Permit to Drill
Statement of Basis

APD No	API WellNo	Status	Well Type	Surf Ownr	CBM
373	43-047-39182-00-00		GW	S	No

Operator	QUESTAR EXPLORATION & PRODUCTIO	**Surface Owner-APD**	
Well Name	RW 23-32BW	**Unit**	RED WASH
Field	UNDESIGNATED	**Type of Work**	
Location	NESW 32 7S 23E S 2131 FSL 1751 FWL	GPS Coord (UTM)	640221E 4447134N

Geologic Statement of Basis

QEP proposes to set 450 feet of surface casing cemented to the surface. The base of the moderately saline water is estimated at 4,900 feet. A search of Division of Water Rights records shows 10 water wells within a 10,000 foot radius of the proposed location. They are owned by oilfield operators with the purpose listed as oilfield use. These wells would be water supply wells for the Red Wash oil field which were converted from previously producing wells. The wells are all nearly 6,000 feet in depth. The surface formation at this location is the Uinta Formation. The Uinta Formation is made up of discontinuous sands interbedded with shales and is not expected to produce prolific aquifers. The production casing cement should be brought up above the base of the moderately saline ground water to isolate it from fresher waters uphole. The proposed casing and cement program should adequately protect usable ground water in the area.

Brad Hill	5/1/2007
APD Evaluator	**Date / Time**

Surface Statement of Basis

The site is in Uintah County, Utah in the Red Wash Oilfield area approximately 23 miles southeast of Vernal, UT. The area is within Antelope Draw, which drains southwesterly approximately 9 miles into the White River. No streams or springs are known in the immediate area. Drainages are ephemeral containing flows only during spring runoff and intense summer storms. Broad open flats characterize the topography or gentle ravines intersected by sometimes-steep sided hills sloping into deep drainages.

Access to the site from Vernal, UT is following the Bonanza State Highway southeasterly, to the Glenn Bench road then following this road and existing oilfield development roads to within 0.35 miles of the site. New road will be constructed from this point.

The RW # 23-32B location begins with the reserve pit extending to the top of a ridge and is laid out in an east-west direction on the south side of this ridge. Several draws or swales begin within the location and will be excavated or covered with fill requiring no diversions. The pad extends south and west to a topography break into a steep sided deep canyon. Corner 8 will be rounded so as not to deposit any fill into the bottom of an adjacent wash. Numerous washes also occur to the west and join this deep canyon. Sandstone bedrock is exposed on the location and as vertical cliffs on the draws and canyons in the area. Although not a good site for constructing a pad, it is the only possibility in the immediate are. No stability problems should occur.

Both the surface and minerals are owned by SITLA. Ed Bonner represented SITLA at the pre-site visit.

Daniel Emmett representing the UDWR stated that the area is classified as yearlong critical habitat for antelope. He stated that the lack of water not forage is the limiting factor affecting the herd in the area. He recommended no restrictions for antelope. No other wildlife is expected to be significantly affected. He gave Ed Bonner of SITLA and Jan Nelson of QEP a copy of his wildlife evaluation and a UDWR recommended seed mix to be used when re-vegetating the locations.

Floyd Bartlett	4/24/2007
Onsite Evaluator	**Date / Time**

Conditions of Approval / Application for Permit to Drill

Category	Condition
Pits	A synthetic liner with a minimum thickness of 16 mils with a felt subliner shall be properly installed and maintained in the reserve pit.

ON-SITE PREDRILL EVALUATION

Utah Division of Oil, Gas and Mining

Operator QUESTAR EXPLORATION & PRODUCTION CO
Well Name RW 23-32BW
API Number 43-047-39182-0 **APD No** 373 **Field/Unit** UNDESIGNATED
Location: 1/4,1/4 NESW **Sec** 32 **Tw** 7S **Rng** 23E 2131 FSL 1751 FWL
GPS Coord (UTM) 640218 4447128 **Surface Owner**

Participants

Floyd Bartlett (DOGM), Jan Nelson and Darrel Knop (Questar), Daniel Emmett (UDWR), Ed Bonner (SITLA).

Regional/Local Setting & Topography

Site is in Uintah County, Utah in the Red Wash Oilfield area approximately 23 miles southeast of Vernal, UT. The area is within Antelope Draw, which drains southwesterly approximately 9 miles into the White River. No streams or springs are known in the immediate area. Drainages are ephemeral containing flows only during spring runoff and intense summer storms. Broad open flats characterize the topography or gentle ravines intersected by sometimes-steep sided hills sloping into deep drainages.

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Both the surface and minerals are owned by SITLA.

Surface Use Plan

Current Surface Use
Grazing
Wildlfe Habitat

New Road Miles	Well Pad		Src Const Material	Surface Formation
0.35	**Width** 258	**Length** 350	Onsite	UNTA

Ancillary Facilities N

Waste Management Plan Adequate? Y

Environmental Parameters

Affected Floodplains and/or Wetland N

Flora / Fauna

Sparse desert type community. Scattered plants include mat saltbrush greasewood, daisys, lomatium, prickly pear curly mesquite, onions evenong primrose, black sage, ephedra and spring annuals.

Antelope, deer, coyote and other small mammals and birds.

Soil Type and Characteristics
Shallow rocky sandy clay

Erosion Issues N

Sedimentation Issues N

Site Stability Issues N

Drainage Diverson Required N

Berm Required? N

Erosion Sedimentation Control Required? N

Paleo Survey Run? Y **Paleo Potental Observed?** N **Cultural Survey Run?** N **Cultural Resources?** N

Reserve Pit

Site-Specific Factors		Site Ranking
Distance to Groundwater (feet)	>200	0
Distance to Surface Water (feet)	>1000	0
Dist. Nearest Municipal Well (ft)	>5280	0
Distance to Other Wells (feet)	300 to 1320	10
Native Soil Type	Mod permeability	10
Fluid Type	Fresh Water	5
Drill Cuttings	Normal Rock	0
Annual Precipitation (inches)	<10	0
Affected Populations	<10	0
Presence Nearby Utility Conduits	Not Present	0
	Final Score	25 1 **Sensitivity Level**

Characteristics / Requirements
70' x 150' x 12' deep, located on the northwest corner wwith in an area of cut. A 10' wide bench is planned around the outer edges. The pit will be lined and the reserve pit backfill will be stockpiled above the pit. Two feet of freeboard is provided.

Closed Loop Mud Required? N **Liner Required?** Y **Liner Thickness** 16 **Pit Underlayment Required?** Y

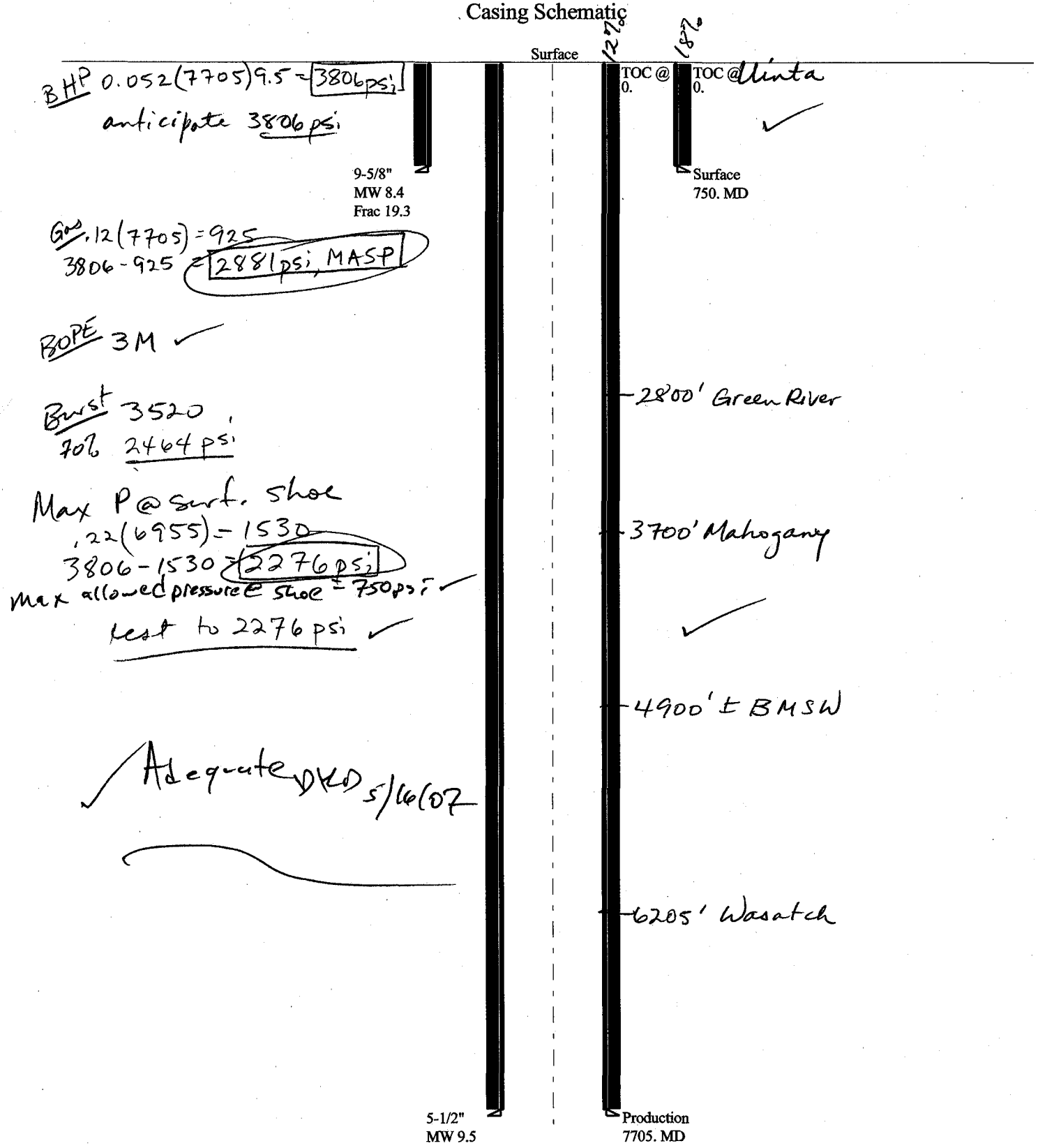
Other Observations / Comments

Floyd Bartlett — **Evaluator**

4/24/2007 — **Date / Time**

2007-05 Questar RW 23-32BW

Casing Schematic



Well name:	**2007-05 Questar RW 23-32BW**
Operator:	**Questar Exploration & Production, CO.**
String type:	Surface
Project ID:	43-047-39182
Location:	Uintah County

Design parameters:

Collapse

Mud weight: 8.400 ppg
Design is based on evacuated pipe.

Burst

Max anticipated surface pressure: 660 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 750 psi

No backup mud specified.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Tension:

8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on buoyed weight.
Neutral point: 657 ft

Environment:

H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature: 86 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 450 ft

Cement top: Surface

Non-directional string.

Re subsequent strings:

Next setting depth: 7,705 ft
Next mud weight: 9.500 ppg
Next setting BHP: 3,802 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 750 ft
Injection pressure: 750 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft^3)
1	750	9.625	36.00	J-55	ST&C	750	750	8.796	325.5

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	327	2020	6.172	750	3520	4.69	24	394	16.66 J

Prepared by: Helen Sadik-Macdonald
Div of Oil,Gas & Minerals
Phone: 801-538-5357
FAX: 801-359-3940
Date: May 8,2007
Salt Lake City, Utah

Remarks:
Collapse is based on a vertical depth of 750 ft, a mud weight of 8.4 ppg The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

Well name:	**2007-05 Questar RW 23-32BW**
Operator:	**Questar Exploration & Production, CO.**
String type:	Production
Project ID:	43-047-39182
Location:	Uintah County

Design parameters:

Collapse

Mud weight: 9.500 ppg
Design is based on evacuated pipe.

Burst

Max anticipated surface pressure: 2,107 psi
Internal gradient: 0.220 psi/ft
Calculated BHP 3,802 psi

No backup mud specified.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Tension:

8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on buoyed weight.
Neutral point: 6,646 ft

Environment:

H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature: 183 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,500 ft

Cement top: Surface

Non-directional string.

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft^3)
2	7000	5.5	15.50	J-55	LT&C	7000	7000	4.825	935.5
1	705	5.5	17.00	J-55	LT&C	7705	7705	4.767	92

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
2	3455	4040	1.169	3647	4810	1.32	103	217	2.10 J
1	3802	4910	1.291	3802	5320	1.40	-5	247	-46.29 J

Prepared by: Helen Sadik-Macdonald
Div of Oil,Gas & Minerals
Phone: 801-538-5357
FAX: 801-359-3940
Date: May 8,2007
Salt Lake City, Utah

Remarks:
Collapse is based on a vertical depth of 7705 ft, a mud weight of 9.5 ppg The casing is considered to be evacuated for collapse purposes.
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:
3160
(UT-922)

April 4, 2007

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2007 Plan of Development Red Wash Unit, Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2007 within the Red Wash Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION

(Proposed PZ Wasatch)

43-047-39182 RW 23-32BW Sec 32 T07S R23E 2131 FSL 1751 FWL
43-047-39183 RW 21-32BW Sec 32 T07S R23E 0859 FNL 1449 FWL

This office has no objection to permitting the wells at this time.

/s/ Michael L. Coulthard

bcc: File – Red Wash Unit
Division of Oil Gas and Mining
Central Files
Agr. Sec. Chron
Fluid Chron

MCoulthard:mc:4-4-07

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 3

APPLICATION FOR PERMIT TO DRILL

5. MINERAL LEASE NO: **UTO-02025-ST**	6. SURFACE: **STATE**
1A. TYPE OF WORK: DRILL ☑ ☐ REENTER ☐ DEEPEN	7. IF INDIAN, ALLOTTEE OR TRIBE NAME: **N/A**
B. TYPE OF WELL ☐ OIL ☑ GAS OTHER ____ ☑ SINGLE ZONE ☐ MULTIPLE ZONE	8. UNIT or CA AGREEMENT NAME: **RED WASH UNIT**
2. NAME OF OPERATOR: **QUESTAR EXPLORATION & PRODUCTION, CO.**	9. WELL NAME and NUMBER: **RW 23-32BW**
3. ADDRESS OF OPERATOR: **1571 E. 1700 S.** CITY **VERNAL** STATE **UT** ZIP **84078** PHONE NUMBER: **(435) 781-4032**	10. FIELD AND POOL, OR WILDCAT: **RED WASH** 665
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: **2131' FSL 1751' FWL** 640113 X 40.170968 AT PROPOSED PRODUCING ZONE: **SAME** 4447821Y -109.354530	11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: **NESW 32 7S 23E**
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: **23 + \ - MILES FROM VERNAL, UT**	12. COUNTY: **UINTAH** 13. STATE: **UTAH**

15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE(FEET)	16. NUMBER OF ACRES IN LEASE:	17. NUMBER OF ACRES ASSIGNED TO THIS WELL:
1751' + / -	640	40
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET)	**19. PROPOSED DEPTH**	**20. BOND DESCRIPTION:**
1690' +/-	7705'	965003033
21. ELEVATIONS (SHOW WHETHER DF, RT, GR,ETC.):	**22. APPROXIMATE DATE WORK WILL START:**	**23. ESTIMATED DURATION:**
5380.7' GR	ASAP	10 DAYS

24 **PROPOSED CASING AND CEMENTING PROGRAM**

SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT			SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT
12 1/4"	9 5/8"	J-55	36 lb/ft (new) STC	750'	SEE 8-POINT DRILLING
7 7/8"	5 1/2"	J-55	15.5 lb (new) LTC	7000'	
7 7/8"	5 1/2"	J-55	17 lb (new) LTC	7705'	

25 **ATTACHMENTS**

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERATION GENERAL RULES:

☑ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER
☑ COMPLETE DRILLING PLAN
☑ EVIDNECE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER
☐ FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNI

NAME (PLEASE PRINT) Jan Nelson TITLE Regulatory Affairs

SIGNATURE Jan Nelson DATE 3/21/07

(This space for State use only)

API NUMBER ASSIGNED: 43-047-39182 APPROVAL: ____

(11/2001)

Approved by the Utah Division of Oil, Gas and Mining

(See Instruction on Reverse Side)

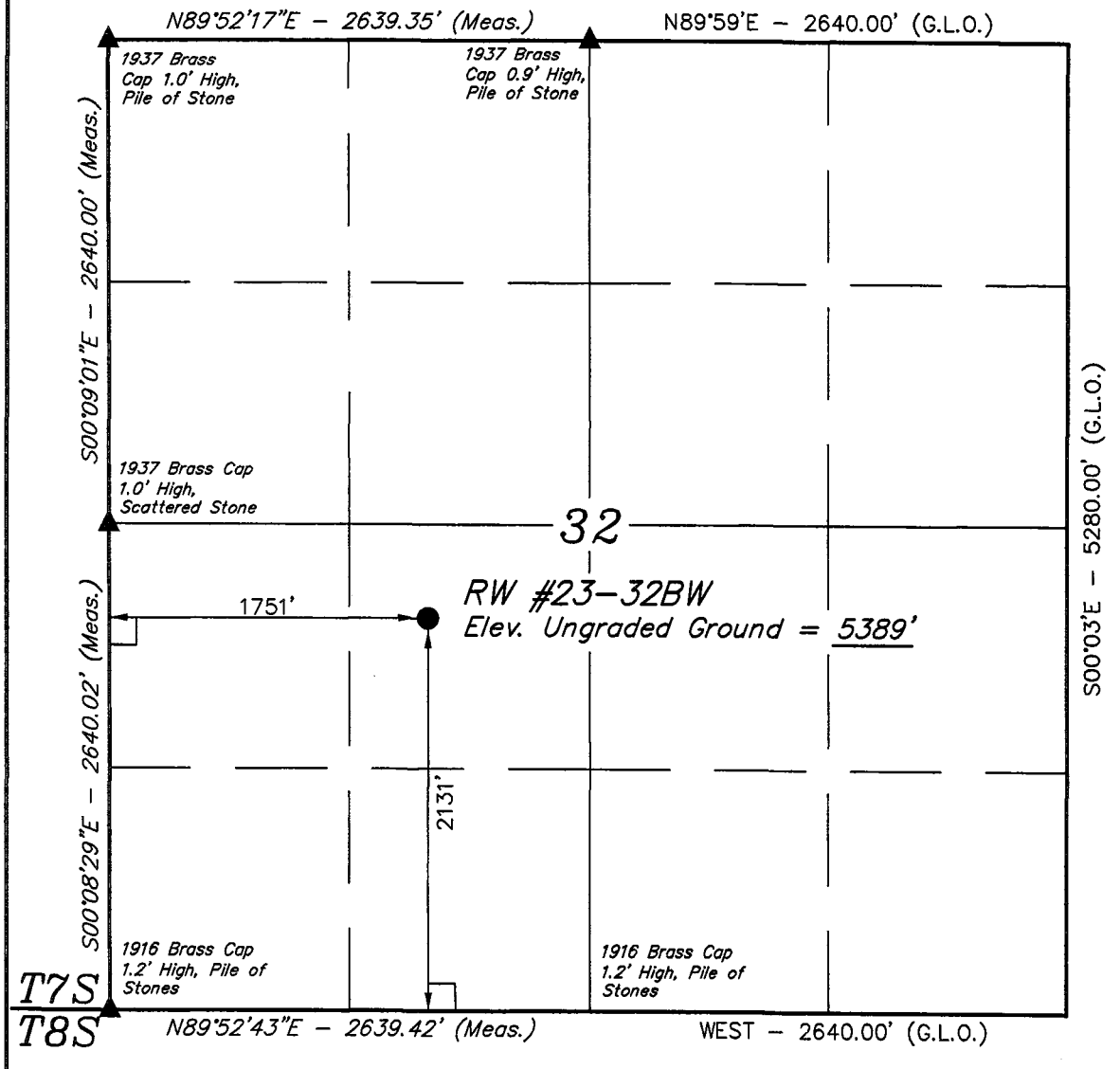
Date: 09-17-07

By:

RECEIVED
MAY 03 2007
DIV. OF OIL, GAS & MINING

CONFIDENTIAL

T7S, R23E, S.L.B.&M.



LEGEND:

└ = 90° SYMBOL

● = PROPOSED WELL HEAD.

▲ = SECTION CORNERS LOCATED.

(NAD 83)

LATITUDE = 40°09'52.76" (40.164656)

LONGITUDE = 109°21'14.93" (109.354147)

(NAD 27)

LATITUDE = 40°09'52.89" (40.164692)

LONGITUDE = 109°21'12.47" (109.353464)

QUESTAR EXPLR. & PROD.

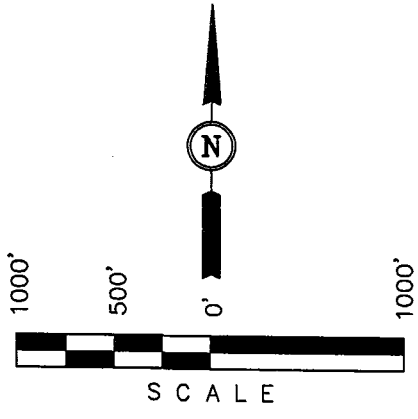
Well location, RW #23-32BW, located as shown in the NE 1/4 SW 1/4 of Section 32, T7S, R23E, S.L.B.&M. Uintah County, Utah.

BASIS OF ELEVATION

BENCH MARK (20EAM) LOCATED IN THE SE 1/4 OF SECTION 35, T8S, R21E, S.L.B.&M. TAKEN FROM THE OURAY SE QUADRANGLE, UTAH, UINTAH COUNTY, 7.5 MINUTE SERIES (TOPOGRAPHICAL MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 4697 FEET.

BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.



CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR
REGISTRATION NO. 161319
STATE OF UTAH

REGISTERED LAND SURVEYOR No. 161319 ROBERT L. KAY STATE OF UTAH

UINTAH ENGINEERING & LAND SURVEYING
85 SOUTH 200 EAST – VERNAL, UTAH 84078
(435) 789-1017

SCALE: 1" = 1000'	DATE SURVEYED: 01-19-07	DATE DRAWN: 01-22-07
PARTY: D.A. B.M. S.L.	REFERENCES: G.L.O. PLAT	
WEATHER: COLD	FILE: QUESTAR EXPLR. & PROD.	

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil Gas and Mining

JOHN R. BAZA
Division Director

September 17, 2007

Questar Exploration & Production, CO
1571 E 1700 S
Vernal, UT 84078

Re: RW 23-32BW Well, 2131' FSL, 1751' FWL, NE SW, Sec. 32, T. 7 South, R. 23 East, Uintah County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann.§ 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-39182.

Sincerely,

Gil Hunt
Associate Director

pab
Enclosures

cc: Uintah County Assessor
SITLA
Bureau of Land Management, Vernal Office

1594 West North Temple, Suite 1210, PO Box 145801, Salt Lake City, UT 84114-5801
telephone (801) 538-5340 • facsimile (801) 359-3940 • TTY (801) 538-7458 • *www.ogm.utah.gov*

UTAH DNR OIL, GAS & MINING

Operator: Questar Exploration & Production, CO

Well Name & Number RW 23-32BW

API Number: 43-047-39182

Lease: UTO-02025-ST

Location: NE SW **Sec.** 32 **T.** 7 South **R.** 23 East

Conditions of Approval

1. **General**

   Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

2. **Notification Requirements**

   The operator is required to notify the Division of Oil, Gas and Mining of the following action during drilling of this well:

   - 24 hours prior to cementing or testing casing – contact Dan Jarvis
   - 24 hours prior to testing blowout prevention equipment – contact Dan Jarvis
   - 24 hours prior to spudding the well – contact Carol Daniels
   - Within 24 hours of any emergency changes made to the approved drilling program – contact Dustin Doucet
   - Prior to commencing operations to plug and abandon the well – contact Dan Jarvis

   The operator is required to get approval from the Division of Oil, Gas and Mining before performing any of the following actions during the drilling of this well:

   - Plugging and abandonment or significant plug back of this well – contact Dustin Doucet
   - Any changes to the approved drilling plan – contact Dustin Doucet

   The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voice mail message if the person is not available to take the call):

   - Dan Jarvis at: (801) 538-5338 office (801) 942-0873 home
   - Carol Daniels at: (801) 538-5284 office
   - Dustin Doucet at: (801) 538-5281 office (801) 733-0983 home

3. **Reporting Requirements**

   All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. Compliance with the State of Utah Antiquities Act forbids disturbance of archeological, historical, or paleontological remains. Should archeological, historical or paleontological remains be encountered during your operations, you are required to immediately suspend all operations and immediately inform the Trust Lands Administration and the Division of State History of the discovery of such remains.

5. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis. (Copy Attached)

From: Ed Bonner
To: Mason, Diana
Date: 9/14/2007 5:12 PM
Subject: Well Clearance

CC: Davis, Jim; Garrison, LaVonne; Hill, Brad; Hunt, Gil

The following wells have been given cultural resources clearance by the Trust Lands Cultural Resources Group:

EOG Resources, Inc
Chapita Wells Unit 732-32 (API 43 047 39599)
Chapita Wells Unit 731-32 (API 43 047 39582)

Questar Exploration & Production Company
RW 23-32BW (API 43 047 39182)
RW 21-32BW (API 43 047 39183)

Petro-Canada Resources (USA), Inc
State 32-11 (API 43 015 30734)

Williams Production RMT Company
State Reservation Ridge 42-2 (API 43 013 33758)

If you have any questions regarding this matter please give me a call.

CONFIDENTIAL FORM 9

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER:	UTO-02025-ST
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	N/A
7. UNIT or CA AGREEMENT NAME:	RED WASH UNIT
1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ OTHER	
8. WELL NAME and NUMBER:	RW 23-32BW
2. NAME OF OPERATOR:	QUESTAR EXPLORATION AND PRODUCTION COMPANY
9. API NUMBER:	4304739182
3. ADDRESS OF OPERATOR:	11002 E. 17500 S. CITY VERNAL STATE UT ZIP 84078
PHONE NUMBER:	(435) 781-4331
10. FIELD AND POOL, OR WILDCAT:	RED WASH

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 2131' FSL 1751' FWL — COUNTY: UINTAH

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESW 32 7S 23E — STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☑ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start: _____	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
_____	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER: Name Change
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Questar Exploration and Production Company proposes to change the well name on the RW 23-32BW to RW 23-32BD.

Approved by the
Utah Division of
Oil, Gas and Mining

Date: 01-28-08

By: Brad Hill

COPY SENT TO OPERATOR
Date: 1-29-2008
Initials: KS

NAME (PLEASE PRINT) Jan Nelson TITLE Regulatory Affairs

SIGNATURE Jan Nelson DATE 1/23/2008

(This space for State use only)

RECEIVED
JAN 25 2008
DIV. OF OIL, GAS & MINING

(5/2000) (See Instructions on Reverse Side)

CONFIDENTIAL

FORM 9

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER:	UTO-02025-ST
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	N/A
7. UNIT or CA AGREEMENT NAME:	RED WASH UNIT
1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ OTHER	8. WELL NAME and NUMBER: RW 23-32BD
2. NAME OF OPERATOR: QUESTAR EXPLORATION AND PRODUCTION COMPANY	9. API NUMBER: 4304739182
3. ADDRESS OF OPERATOR: 11002 E. 17500 S. CITY VERNAL STATE UT ZIP 84078 / PHONE NUMBER: (435) 781-4331	10. FIELD AND POOL, OR WILDCAT: RED WASH

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 2131' FSL 1751' FWL — COUNTY: UINTAH

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESW 32 7S 23E — STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☑ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☑ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start: _____	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
_____	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER: _____
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Questar Exploration and Production Company (QEP) proposes to deepen the well from the approved total depth of 7705' to 16,900'. The proposed changes require a change in casing design and cement design. Attached is a new 8-point Drilling Plan showing the proposed changes. Also, QEP has need to enlarge the well pad to accommodate the larger Drilling Rig that is needed to drill this well.

Approved by the
Utah Division of
Oil, Gas and Mining

Date: 01-28-08

By: [signature]

RECEIVED
JAN 28 2008
DIV OF OIL, GAS & MINING

COPY SENT TO OPERATOR
Date: 1-29-2008
Initials: KS

NAME (PLEASE PRINT) Jan Nelson — TITLE Regulatory Affairs

SIGNATURE [signature] — DATE 1/28/2008

(This space for State use only)

Federal Approval of this Action is Necessary

(5/2000) (See Instructions on Reverse Side)

CONFIDENTIAL

ONSHORE OIL & GAS ORDER NO. 1
QUESTAR EXPLORATION AND PRODUCTION COMPANY
RW 23-32BD

DRILLING PROGRAM

ONSHORE OIL & GAS ORDER NO. 1
Approval of Operations on Onshore
Federal Oil and Gas Leases

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR 3100), Onshore Oil and Gas No. 1, and the approved plan of operations. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished the field representative to insure compliance.

1. Formation Tops

The estimated tops of important geologic markers are as follows:

Formation	Depth
Uinta	Surface
Green River	2,845'
Wasatch	6,245'
Mesaverde	8,805'
Castlegate	11,265'
Blackhawk	11,565'
Mancos Shale	12,095'
Mancos B	12,570'
Frontier	15,255'
Dakota Silt	16,175'
Dakota	16,355'
Morrison	16,805
TD	16,900'

2. Anticipated Depths of Oil Gas Water and Other Mineral Bearing Zones

The estimated depths at which the top and bottom of the anticipated water, oil, gas. Or other mineral bearing formations are expected to be encountered are as follows:

Substance	Formation	Depth
Gas	Wasatch	6,245'
Gas	Mesaverde	8,805'
Gas	Blackhawk	11,565'
Gas	Mancos Shale	12,095'
Gas	Mancos B	12,570'
Gas	Dakota	16,355'

All fresh water and prospectively valuable minerals encountered during drilling, will be recorded by depth and adequately protected. All oil and gas shows will be tested to determine commercial potential.

All water shows and water-bearing sands will be reported to the BLM in Vernal, Utah. Copies of State of Utah form OGC-8-X are acceptable. If flows are detected, samples will be submitted to the BLM along with any water analyses conducted. Fresh water will be obtained from Wonsits Valley water right # A36125 (which was filed on May 7, 1964,) or Red Wash water right # 49-2153 (which was filed on March 25, 1960). It was determined by the Fish and Wildlife Service that any water right number filed before1989 is not depleting to the Upper Colorado River System, to supply fresh water for drilling purposes. All water resulting from drilling operations will be disposed of at Red Wash Central Battery Disposal Site; SWSE, Section 27, T7S, R23E or Wonsits Valley Disposal Site; SWNW, Section 12, T8S, R21E.

3. Operator's Specification for Pressure Control Equipment:

A. 11" 5000 psi double gate, 5,000 psi annular BOP (schematic included) from surface hole to 7" casing point. 10,000 psi 13-5/8" equipment may be substituted for the 5000 psi equipment.

B. 11" 10,000 psi double gate, 10,000 psi single gate, 10,000 psi annular BOP (schematic included) from 7" casing point to total depth. 13-5/8" 10,000 psi equipment may be substituted for the 11" 10,000 psi equipment.

C. Functional test daily

D. All casing strings shall be pressure tested (0.2 psi/foot or 1500 psi, whichever is greater) prior to drilling the plug after cementing; test pressure shall not exceed the internal yield pressure of the casing.

E. Ram type preventers and associated equipment shall be tested to approved stack working pressure if isolated by test plug or to 50 percent of internal yield pressure of casing whichever is less. BOP and related equipment shall meet the minimum requirements of Onshore Oil and Gas Order No. 2 for equipment and testing requirements, procedures, etc..., for a 10M system and individual components shall be operable as designed.

ONSHORE OIL & GAS ORDER NO. 1
QUESTAR EXPLORATION AND PRODUCTION COMPANY
RW 23-32BD

DRILLING PROGRAM

4. Casing Design:

Hole Size	Csg. Size	Top (MD)	Bottom (MD)	Wt.	Grade	Thread	Cond.
26"	20"	Sfc	40-60'	Steel	Cond.	None	Used
14-3/4"	10-3/4"	Sfc	1100'	40.5	J-55	STC	New
8-1/2"	7"	Sfc	9000'	26	HCP-110	LTC	New
8-1/2"	7"	9000'	11,500'	29* SDrift	HCP-110	LTC	New
6-1/8"	4-1/2"	sfc	13,000'	15.1	P-110	LTC	New
6-1/8"	4-1/2"	13,000'	15,000'	15.1	Q-125	LTC	New
6-1/8"	4-1/2"	15,000'	16,900'	17.1	Q-125	LTC	New

Casing Strengths:				Collapse	Burst	Tensile (minimum)
10-3/4"	40.5 lb.	J-55	STC	1,580 psi	3,130 psi	420,000 lb.
7"	26 lb.	HCP-110	LTC	7,800 psi	9,950 psi	693,000 lb.
7"	29 lb.*	HCP-110	LTC	9,200 psi	11,220 psi	797,000 lb.
4-1/2"	15.1 lb.	P-110	LTC	14,350 psi***	14,420 psi	406,000 lb.
4-1/2"	15.1 lb.	Q-125	LTC	15,840 psi***	16,380 psi	438,000 lb.
4-1/2"	17.1 lb.	Q-125	LTC	19,010 psi***	18,130 psi	493,000 lb.

*** Special Drift**

MINIMUM DESIGN FACTORS:

COLLAPSE: 1.0 – 1.3***
BURST: 1.10
TENSION: 1.80

DRILLING PROGRAM

Area Fracture Gradient: 0.9 psi/foot
Maximum anticipated mud weight: 15.1 ppg for hole stability and not pore pressure
Maximum surface treating pressure: 12,500 psi

5. Auxiliary Equipment

A. Kelly Cock – yes

B. Float at the bit – yes

C. Monitoring equipment on the mud system – visually and/or PVT/Flow Show

D. Full opening safety valve on the rig floor – yes

E. Rotating Head – yes
If drilling with air the following will be used:

F. The blooie line shall be at least 6" in diameter and extend at least 100' from the well bore into the reserve/blooie pit.

G. Blooie line ignition shall be provided by a continuous pilot (ignited when drilling below 500').

H. Compressor shall be tied directly to the blooie line through a manifold.

I. A mister with a continuous stream of water shall be installed near the end of the blooie lines for dust suppression.

Surface hole will be drilled with air, air/mist, foam, or mud depending on hole conditions. Drilling below surface casing will be with water based drilling fluids consisting primarily of fresh water, bentonite, lignite, caustic, lime, soda ash and polymers. No chromates will be used. It is not intended to use oil in the mud, however, in the event it is used, oil concentration will be less than 4% by volume. Maximum anticipated mud weight is 13.6 ppg.

No minimum quantity of weight material will be required to be kept on location.

PVT/Flow Show will be used from base of surface casing to TD.

Gas detector will be used from surface casing depth to TD.

6. Testing, logging and coring program

A. Cores – none anticipated

B. DST – none anticipated

C. Logging – Mud logging – 4500' to TD
GR-SP-Induction, Neutron Density, FMI/Sonic Scanner

D. Formation and Completion Interval: Mancos interval, final determination of completion will be made by analysis of logs.
Stimulation – Stimulation will be designed for the particular area of interest as encountered.

7. Cementing Program

20" Conductor:
Cement to surface with construction cement.

10-3/4" Surface Casing: sfc – 1100' (MD)
Slurry: 0' – 1100'. 1020 sxs (1224 cu ft) Premium cement + 0.25 lbs/sk Flocele + 2% $CaCl_2$ Slurry wt: 15.6 ppg, slurry yield: 1.20 ft^3/sx, slurry volume: 12/1/4" hole + 100% excess.

7" Intermediate Casing: sfc - 11,500' (MD)
Foamed Lead Slurry 2: Sfc – 10,900'. 1058 sks (2073 cu ft) 50/50 Poz Premium + 5 lb/sk silicalite compacted light weight additive + 20% SSA-1 additive + 0.3% FDP-C766-05 fluid loss + 0.2% Versaset thixotropic additive + 1.5% Zonesealant 2000 foamer. Slurry wt: 14.3 ppg, foamed 11.5 ppg, Slurry yield: 1.48 ft^3/sk, Slurry yield foamed: 1.96 ft^3/sk, Slurry volume: 8-1/2" hole + 50% excess.
Tail Slurry: 10,900' – 11,500'. 91 sks (135 cu ft) of 50/50 Poz Premium + 5 lb/sk silicalite compacted light weight additive + 20% SSA-1 additive + 0.3% FDP-C766-05 fluid loss + 0.2% Versaset thixotropic additive. Slurry wt: 14.3 ppg, Slurry yield: 1.48 ft^3/sk, Slurry volume: 8-1/2" hole + 50% excess.

4-1/2" Production Casing: sfc - 16,900' (MD)
Lead/Tail Slurry: 6,000 - 16,900'. 782 sks (1283cu ft) Premium Cement + 0.5% HR-12 retarder + 35% SSA-1 + 0.2% Suspend HT + 0.4% Halad(R)-344 fluid loss + 0.3% Halad(R)-413 fluid loss + 0.4% Super CBL gas migration + 0.2% HR-25 retarder. Slurry wt: 15.25 ppg, Slurry yield: 1.64 ft^3/sk, Slurry volume: 6-1/8" hole + 25% in open hole section.

*Final cement volumes to be calculated from caliper log with an attempt to be made to circulate cement to the surface on the intermediate string and 6,000' on the production string. A bond log will be run across the zone of interest and across zones as required by the authorized officer to insure protection of natural resources.

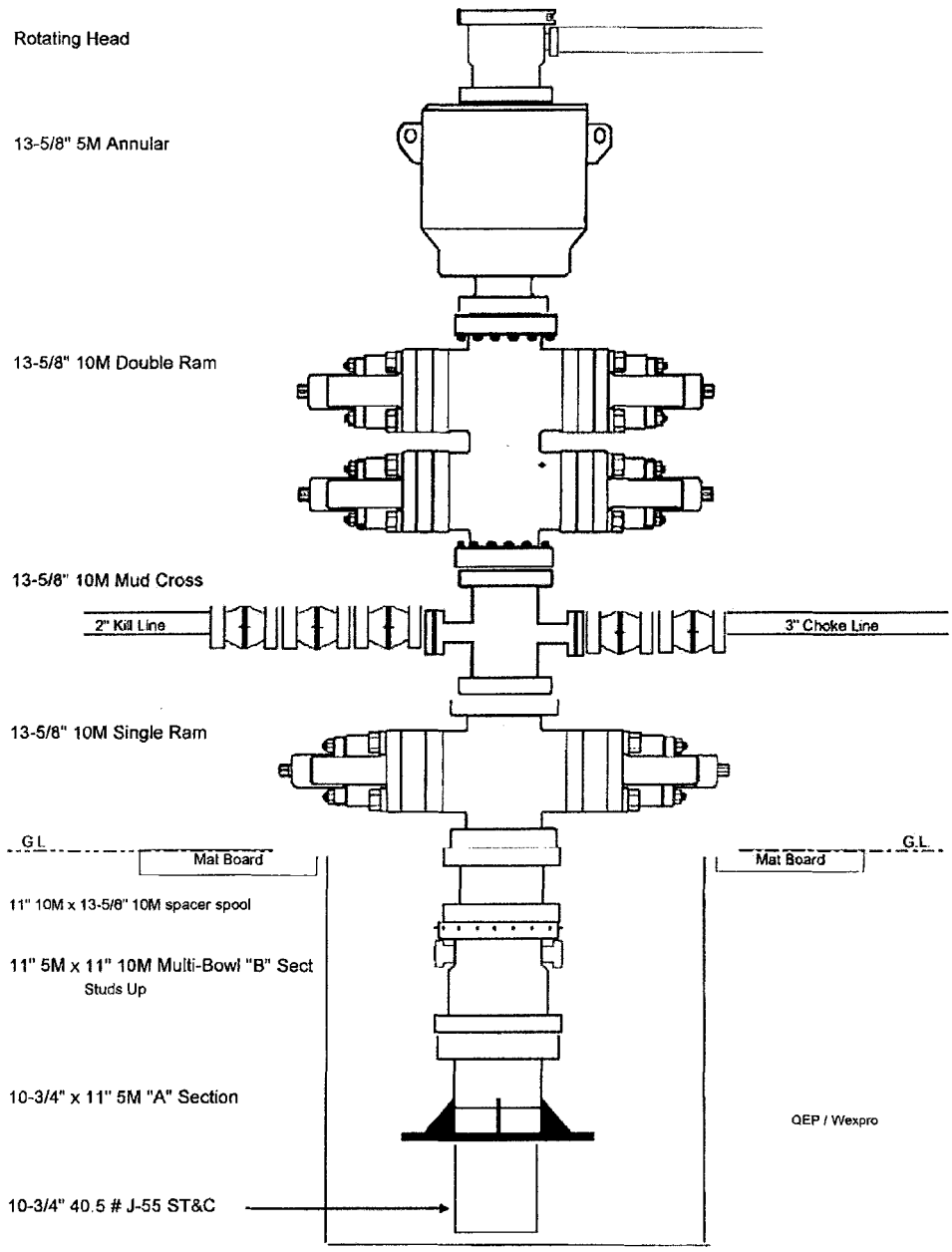
DRILLING PROGRAM

8. Anticipated Abnormal Pressures and Temperatures, Other Potential Hazards

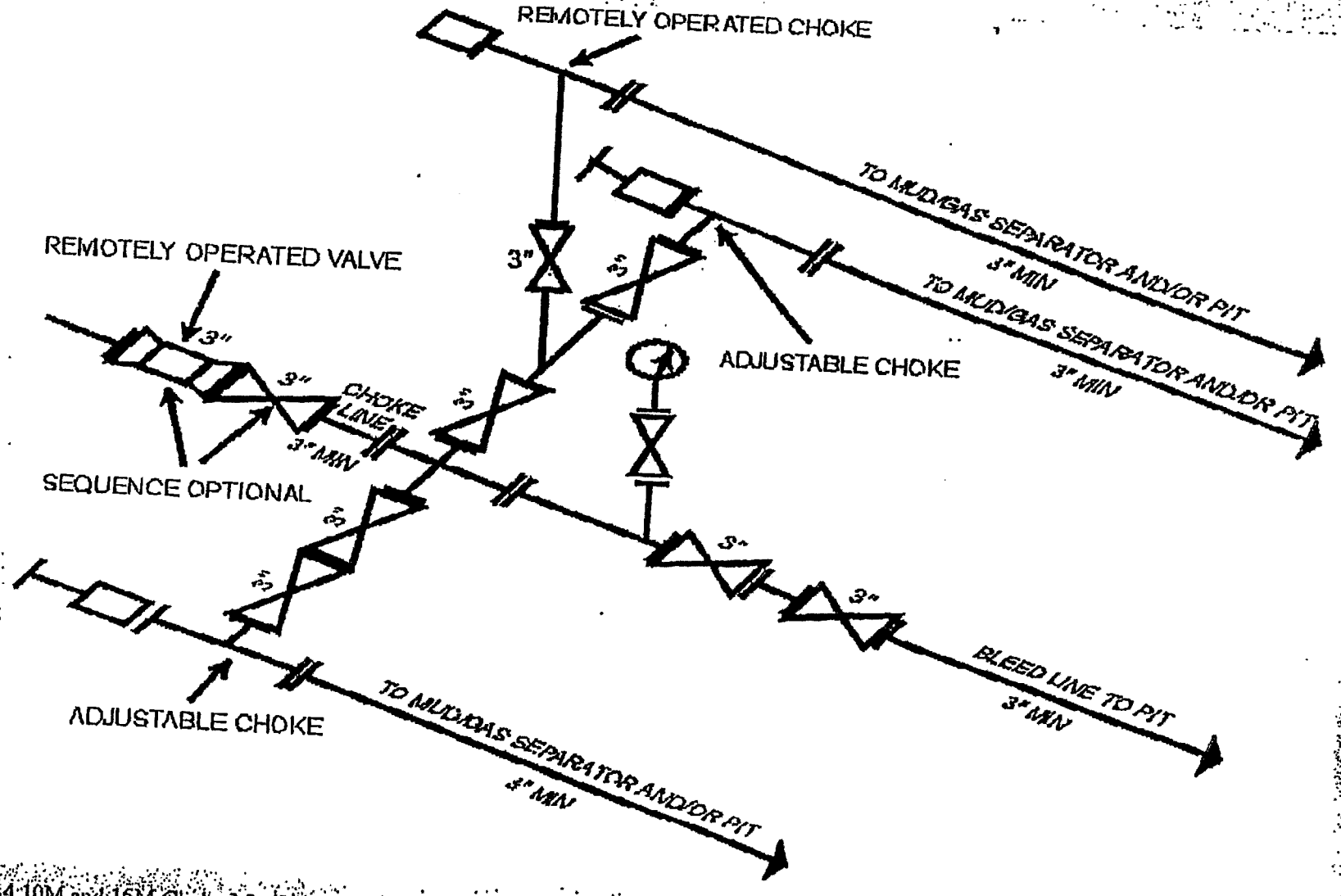
No H2S has been encountered in or known to exist from previous wells drilled to similar depths in the general area. Maximum anticipated bottom hole pressure equals approximately 10,000 psi. Maximum anticipated bottom hole temperature is 280° F.

ONSHORE OIL & GAS ORDER NO. 1
QUESTAR EXPLORATION AND PRODUCTION COMPANY
RW 23-32BD

DRILLING PROGRAM

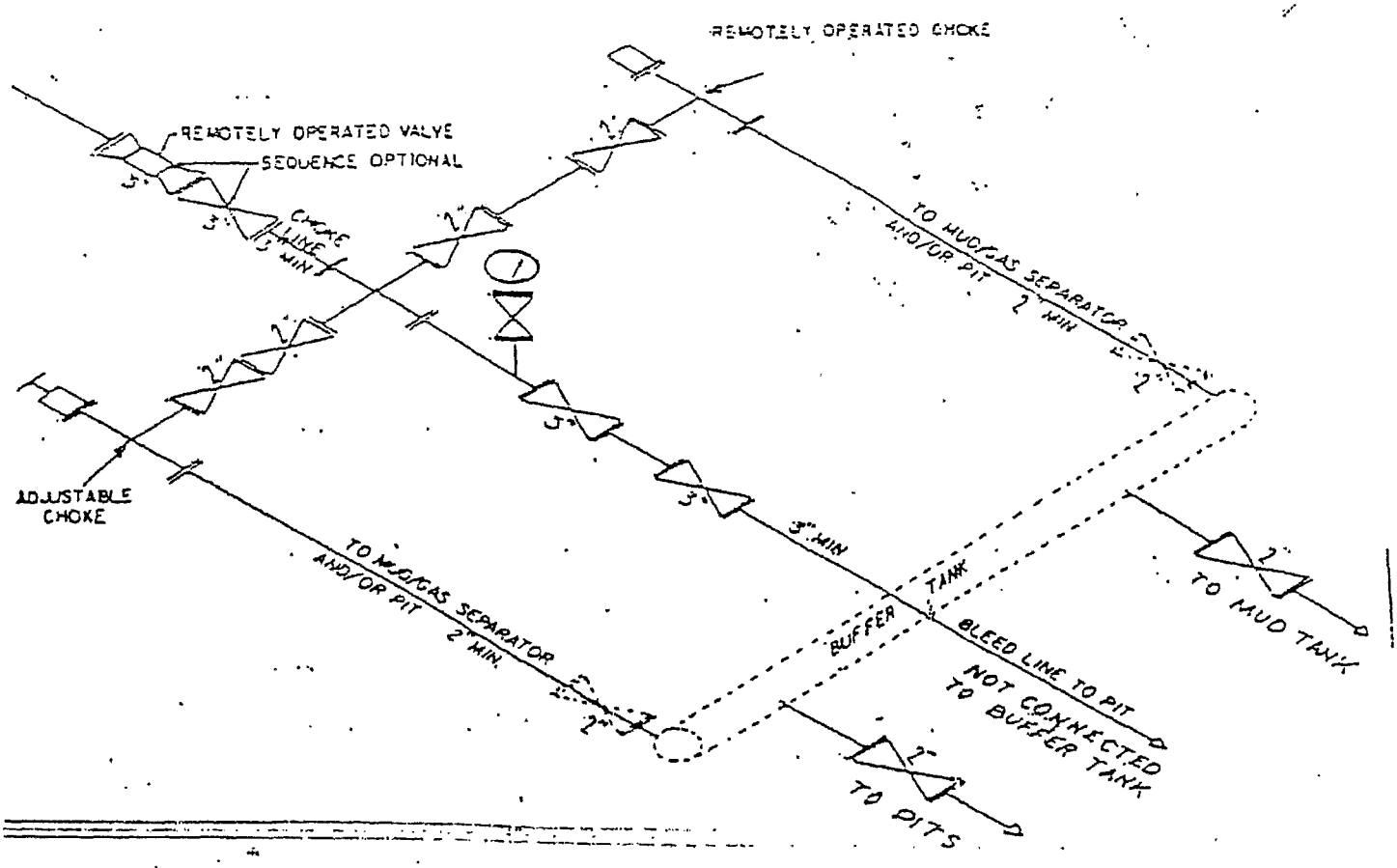


Attachment I. Diagrams of Choke Manifold Equipment



I-4 10M and 15M Choke Manifold Equipment -- Configuration of chokes may vary

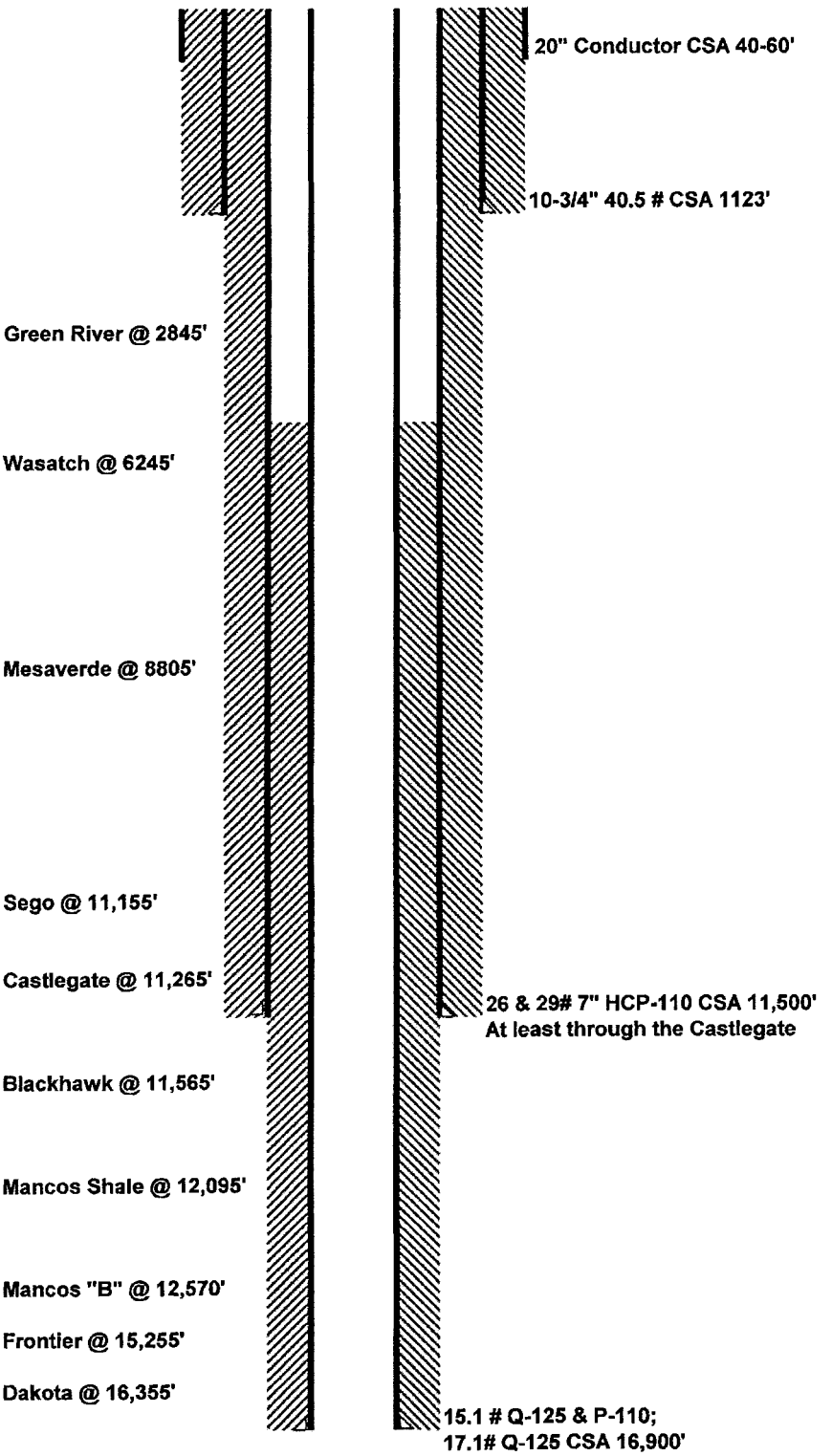
[54FR 39528, Sept. 27, 1989]



(2) 5M CHOKE MANIFOLD EQUIPMENT — CONFIGURATION OF CHOKES MAY VARY

[FR Doc. 88-26738 Filed 11-17-88; 8:45 am]
BILLING CODE 4310-84-C

RW 23-32BD


20" Conductor CSA 40-60'
10-3/4" 40.5 # CSA 1123'
Green River @ 2845'
Wasatch @ 6245'
Mesaverde @ 8805'
Sego @ 11,155'
Castlegate @ 11,265'
Blackhawk @ 11,565'
Mancos Shale @ 12,095'
Mancos "B" @ 12,570'
Frontier @ 15,255'
Dakota @ 16,355'
26 & 29# 7" HCP-110 CSA 11,500'
At least through the Castlegate
15.1 # Q-125 & P-110;
17.1# Q-125 CSA 16,900'

QUESTAR EXPLR. & PROD.

RW #23-32BD

LOCATED IN UINTAH COUNTY, UTAH
SECTION 32, T7S, R23E, S.L.B.&M.

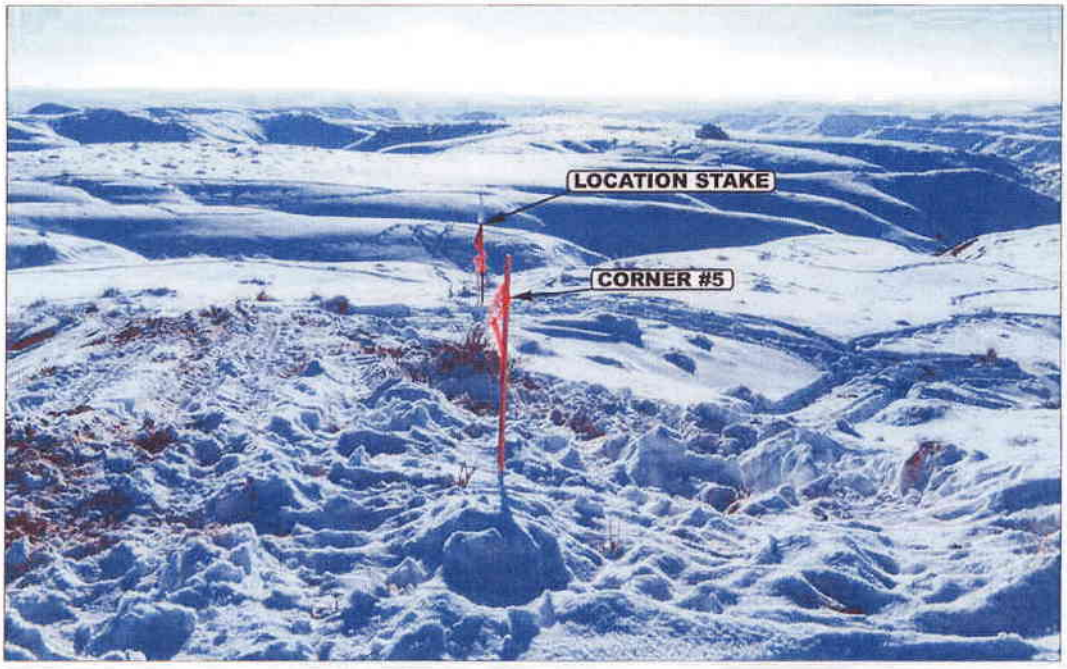


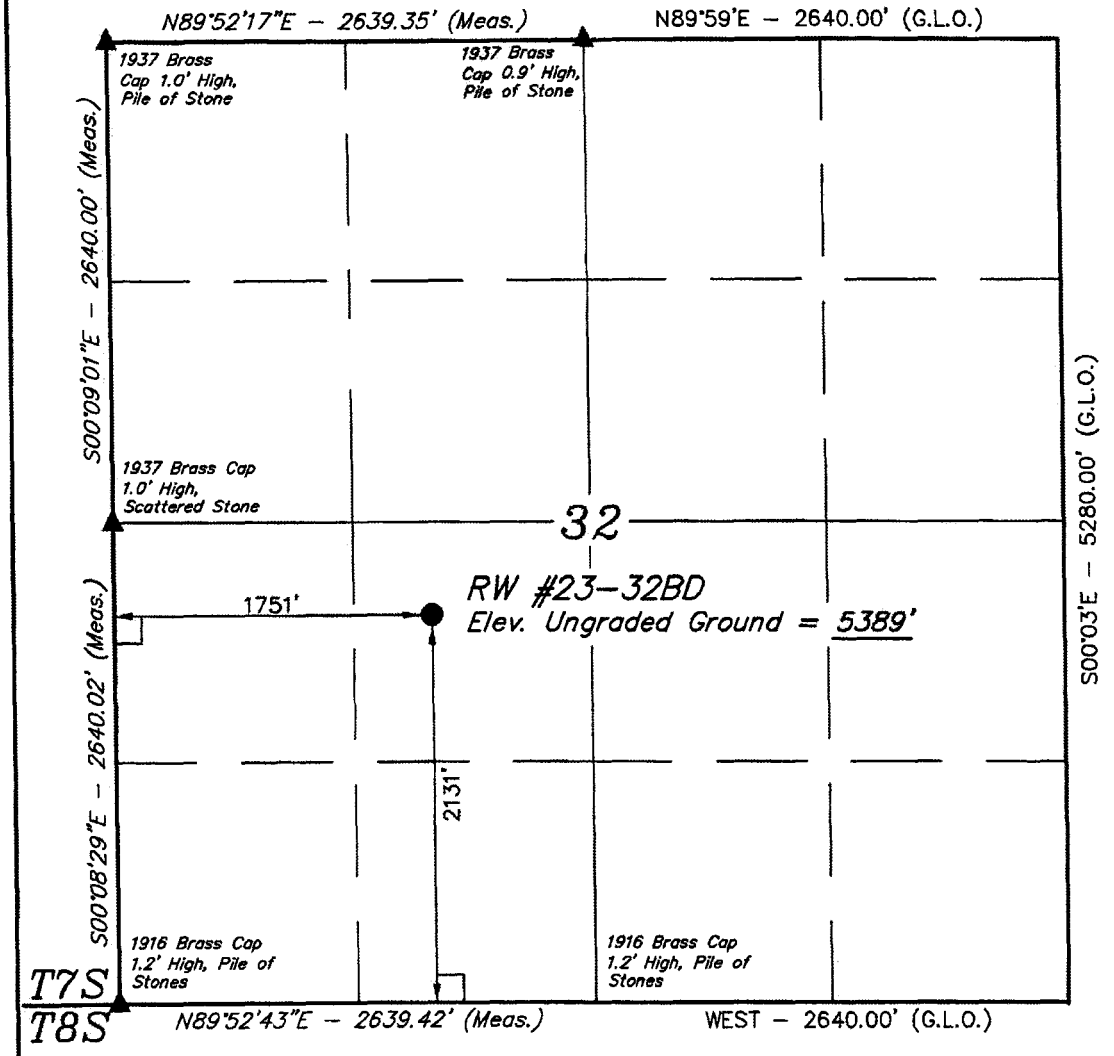
PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKE **CAMERA ANGLE: SOUTHWESTERLY**

PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS **CAMERA ANGLE: SOUTHERLY**

- Since 1964 -
Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
435-789-1017 uels@uelsinc.com

LOCATION PHOTOS	01 MONTH	19 DAY	07 YEAR	PHOTO
TAKEN BY: D.A.	DRAWN BY: C.P.	REV: 09-17-07 C.C.		

T7S, R23E, S.L.B.&M.



LEGEND:

└ = 90° SYMBOL

● = PROPOSED WELL HEAD.

▲ = SECTION CORNERS LOCATED.

(NAD 83)

LATITUDE = 40°09'52.76" (40.164656)

LONGITUDE = 109°21'14.93" (109.354147)

(NAD 27)

LATITUDE = 40°09'52.89" (40.164692)

LONGITUDE = 109°21'12.47" (109.353464)

QUESTAR EXPLR. & PROD.

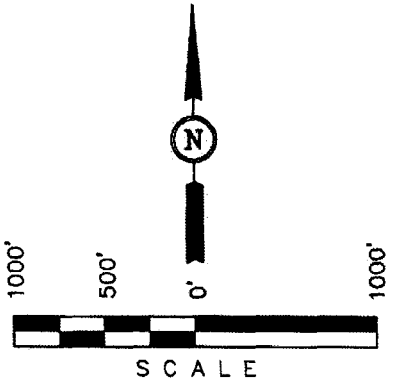
Well location, RW #23-32BD, located as shown in the NE 1/4 SW 1/4 of Section 32, T7S, R23E, S.L.B.&M. Uintah County, Utah.

BASIS OF ELEVATION

BENCH MARK (20EAM) LOCATED IN THE SE 1/4 OF SECTION 35, T8S, R21E, S.L.B.&M. TAKEN FROM THE OURAY SE QUADRANGLE, UTAH, UINTAH COUNTY, 7.5 MINUTE SERIES (TOPOGRAPHICAL MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 4697 FEET.

BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.



CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR
REGISTRATION NO. 161318
STATE OF UTAH

REVISED: 09-18-07

UINTAH ENGINEERING & SURVEYING

85 SOUTH 200 EAST – VERNAL, UTAH 84078

(435) 789-1017

SCALE	DATE SURVEYED:	DATE DRAWN:
1" = 1000'	01-19-07	01-22-07
PARTY: D.A. B.M. S.L.	REFERENCES: G.L.O. PLAT	
WEATHER: COLD	FILE: QUESTAR EXPLR. & PROD.	

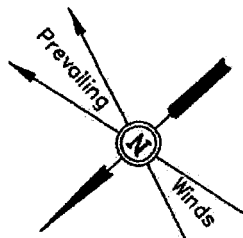
QUESTAR EXPLR. & PROD.

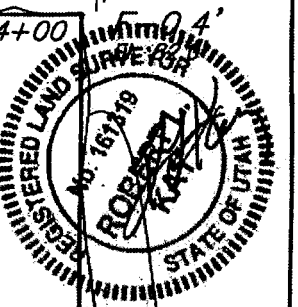
LOCATION LAYOUT FOR

RW #23-32BD
SECTION 32, T7S, R23E, S.L.B.&M.
2131' FSL 1751' FWL

FIGURE #1

SCALE: 1" = 60'
DATE: 09-18-07
Drawn By: S.L.





NOTE:
Flare Pit is to be located a min. of 100' from the Well Head.

8 F-0.4' El. 83.4'
7 F-2.0' El. 80.4'
6 F-2.7' El. 79.7'
5 C-14.8' El. 97.2'
4 F-4.5' El. 77.9'
3 F-6.6' El. 75.8'
2 F-12.3' El. 70.1'
1 F-13.5' El. 68.9'
A C-0.2' El. 82.6'
B El. 81.0' C-18.6' (Btm. Pit)
C El. 96.2' C-33.8' (Btm. Pit)
D C-14.5' El. 96.9'
E C-6.5' El. 88.9'

Sta. 4+00
Sta. 2+00
Sta. 0+00
Sta. 0+51

155'
204'
210'
160'
55'
100'
215'
230'
21'

Topsoil Stockpile
Topsoil Stockpile
Reserve Pit Backfill & Spoils Stockpile
Approx. Top of Cut Slope
Approx. Toe of Fill Slope
CATCH TANK
FLARE PIT
PIPE TUBS
CATWALK
PIPE RACKS
RIG
DOG HOUSE
MUD TANKS
PUMP HOUSE
LIGHT PLANT
BOILER
COMPRESSOR
BOOSTER
TOILET
TRAILER
WATER TANK
TRASH
PROPANE STORAGE
RESERVE PITS (20' Deep)
SLOPE 1-1/2 :1
10' WIDE BENCH
Total Pit Capacity W/2' of Freeboard = 33,560 Bbls. ± Total Pit Volume = 8,480 Cu. Yds.
Existing Drainage
Existing Drainage
Existing Drainage
Existing Drainage
Existing Drainage
CONSTRUCT DIVERSION DITCH
Proposed Access Road

NOTES:

Elev. Ungraded Ground At Loc. Stake = 5388.9'
FINISHED GRADE ELEV. AT LOC. STAKE = 5382.4'

UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East • Vernal, Utah 84078 • (435) 789-1017

QUESTAR EXPLR. & PROD.

TYPICAL CROSS SECTIONS FOR

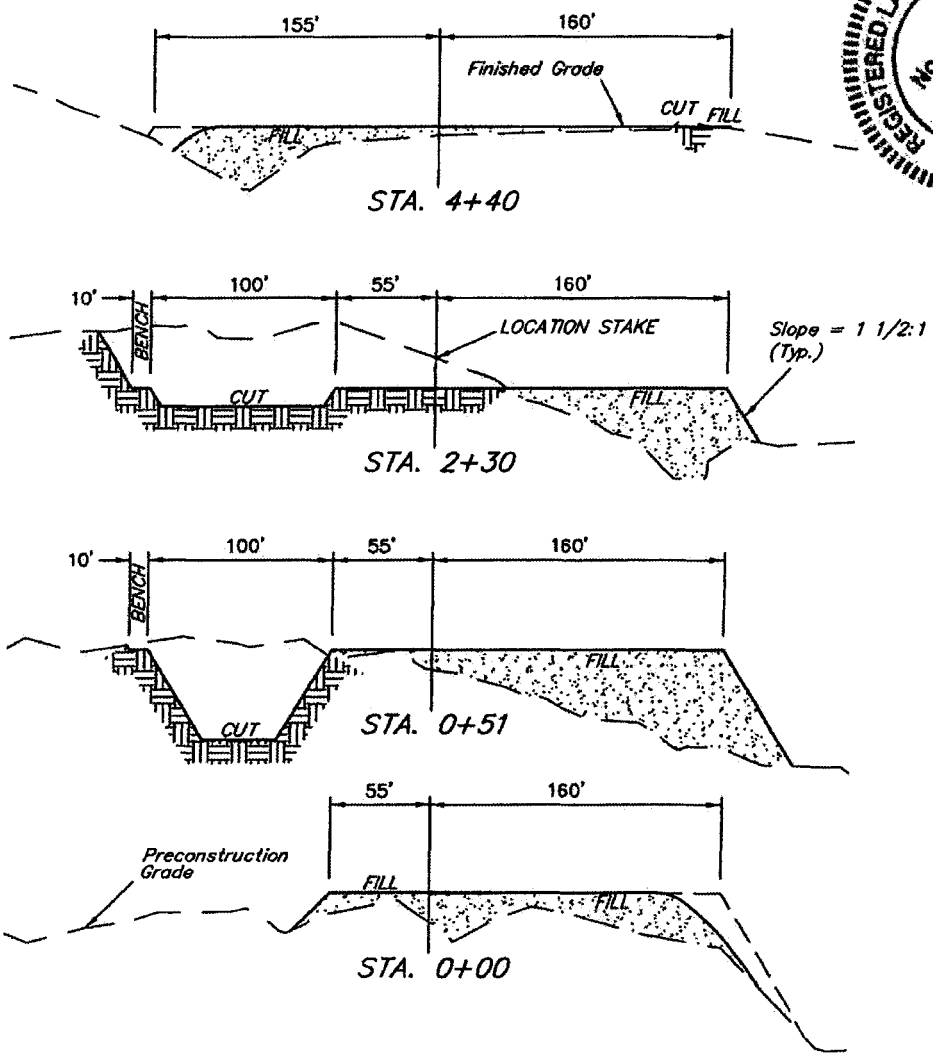
RW #23-32BD
SECTION 32, T7S, R23E, S.L.B.&M.
2131' FSL 1751' FWL

FIGURE #2

1" = 20'
X-Section Scale
1" = 50'

DATE: 09-18-07
Drawn By: S.L.

REGISTERED LAND SURVEYOR No. 161319 ROBERT KAY STATE OF UTAH



APPROXIMATE ACREAGES

WELL SITE DISTURBANCE = ± 3.745 ACRES
ACCESS ROAD DISTURBANCE = ± 1.176 ACRES
PIPELINE DISTURBANCE = ± 1.103 ACRES
TOTAL = ± 6.024 ACRES

* NOTE:
FILL QUANTITY INCLUDES 5% FOR COMPACTION

NOTE:
Topsoil should not be Stripped Below Finished Grade on Substructure Area.

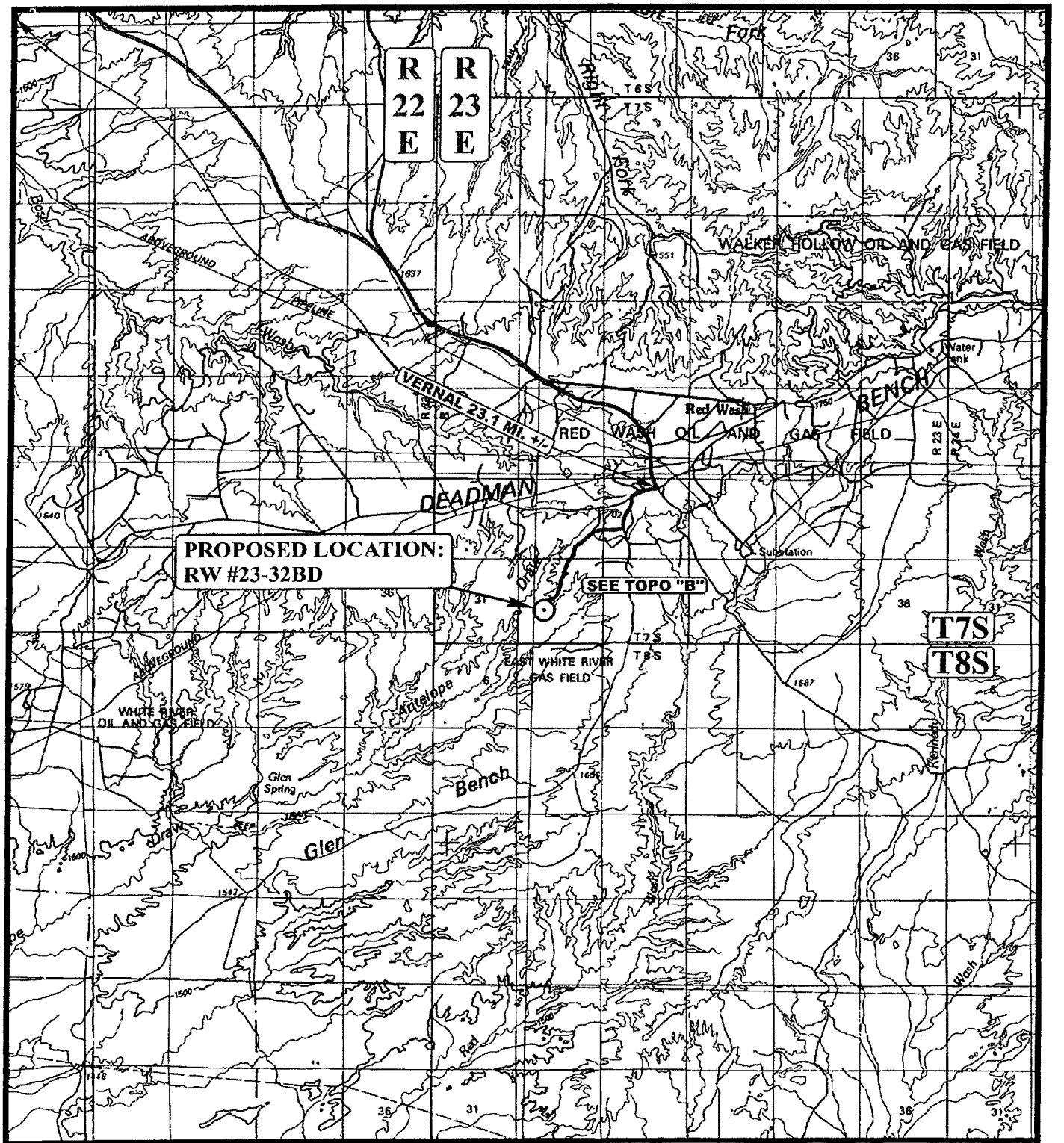
APPROXIMATE YARDAGES

CUT
(6") Topsoil Stripping = 3,200 Cu. Yds.
Remaining Location = 26,040 Cu. Yds.

TOTAL CUT = 29,240 CU.YDS.
FILL = 21,800 CU.YDS.

EXCESS MATERIAL = 7,440 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.) = 7,440 Cu. Yds.
EXCESS UNBALANCE (After Interim Rehabilitation) = 0 Cu. Yds.

UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East * Vernal, Utah 84078 * (435) 789-1017



LEGEND:

⊙ PROPOSED LOCATION

N

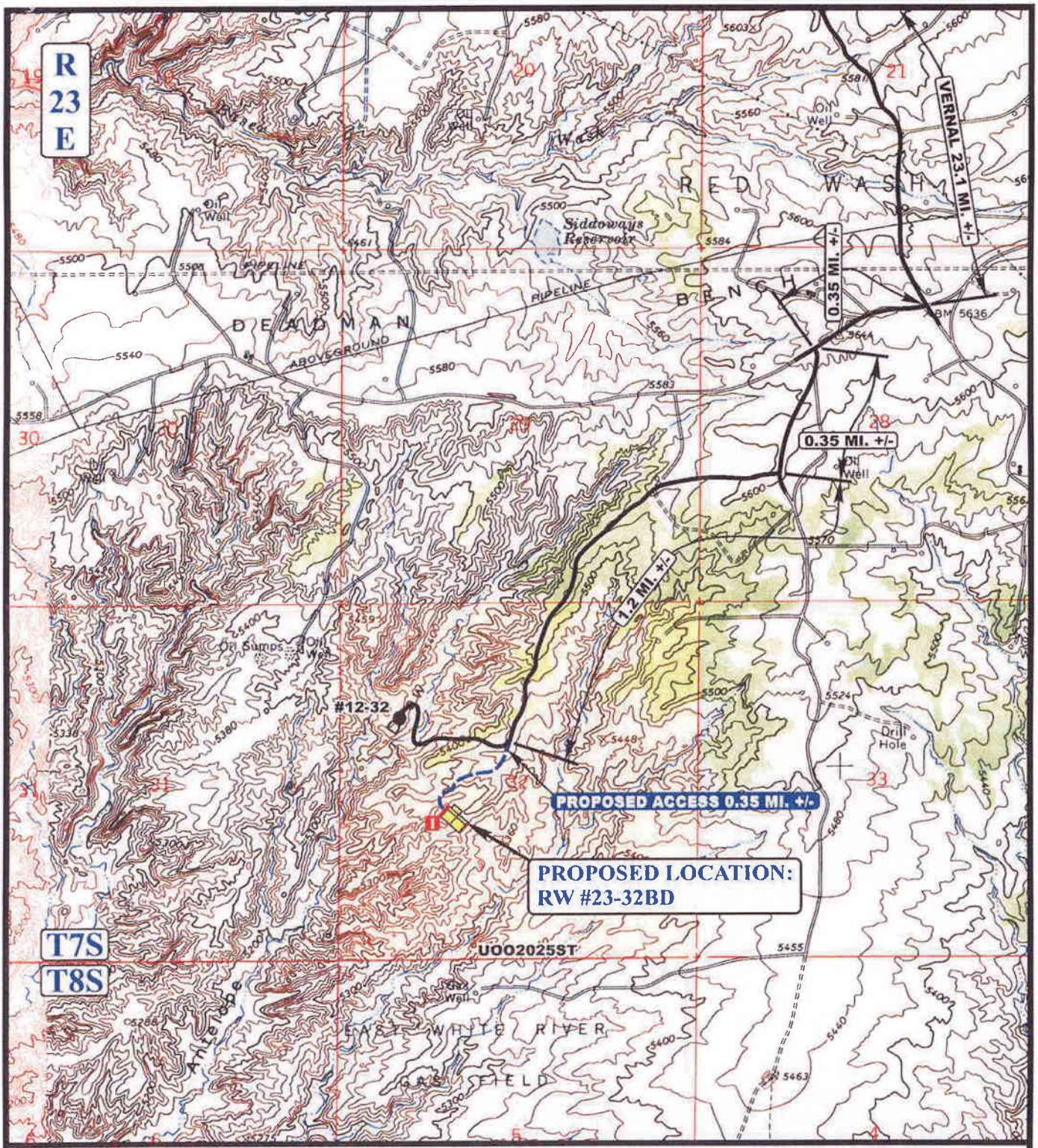
QUESTAR EXPLR. & PROD.

RW #23-32BD
SECTION 32, T7S, R23E, S.L.B.&M.
2131' FSL 1751' FWL

Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC MAP	01 MONTH	19 DAY	07 YEAR
SCALE: 1:100,000	DRAWN BY: C.P.	REV: 09-17-07 C.C.	

A TOPO



LEGEND:

EXISTING ROAD

PROPOSED ACCESS ROAD

18" CMP REQUIRED

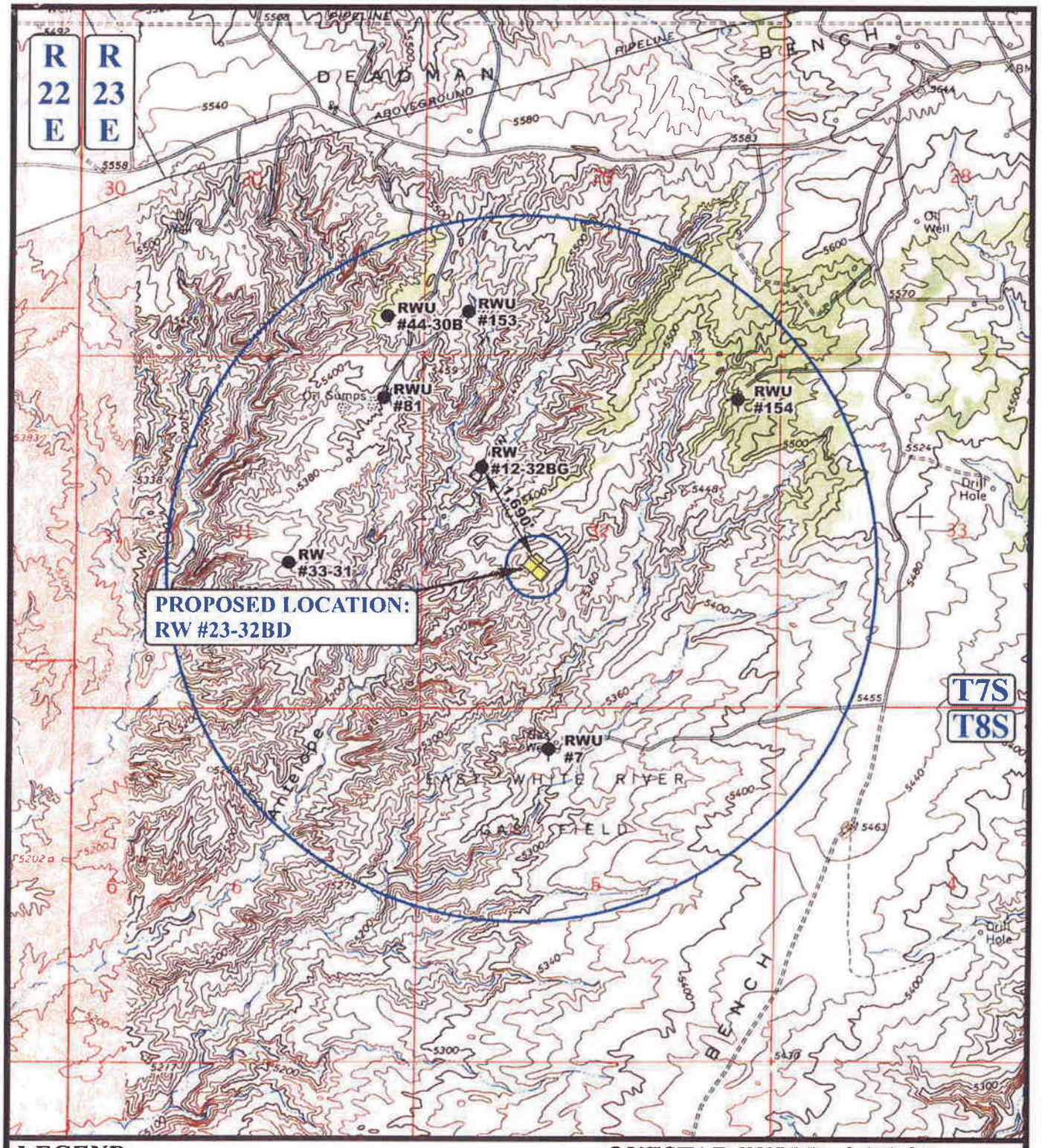
N

QUESTAR EXPLR. & PROD.

RW #23-32BD
SECTION 32, T7S, R23E, S.L.B.&M.
2131' FSL 1751' FWL

Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC MAP	01 MONTH	19 DAY	07 YEAR	B TOPO
SCALE: 1" = 2000'	DRAWN BY: C.P.	REV: 09-17-07 C.C.		



LEGEND:

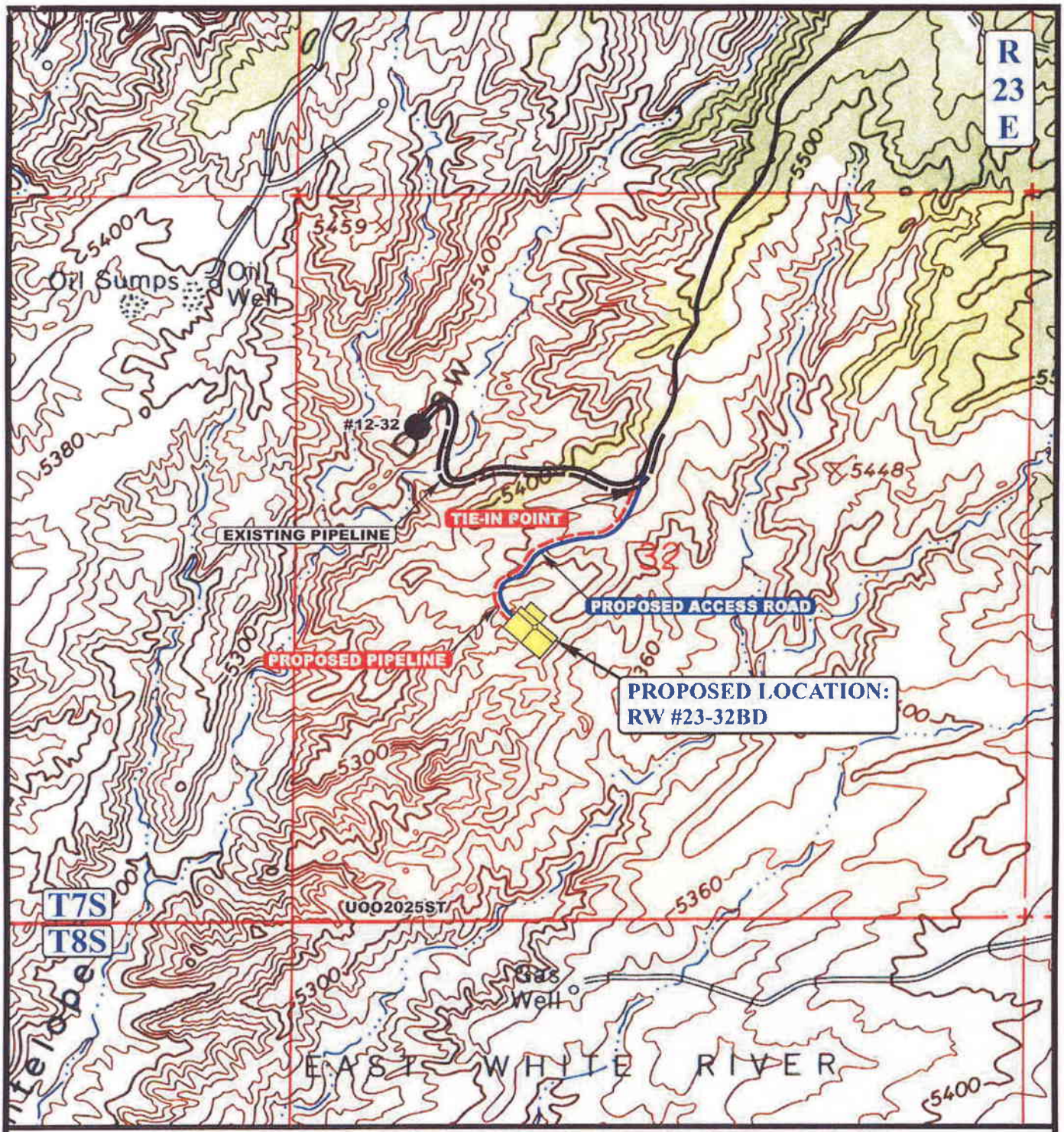
- DISPOSAL WELLS
- WATER WELLS
- PRODUCING WELLS
- ABANDONED WELLS
- SHUT IN WELLS
- TEMPORARILY ABANDONED

QUESTAR EXPLR. & PROD.

RW #23-32BD
SECTION 32, T7S, R23E, S.L.B.&M.
2131' FSL 1751' FWL

Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC MAP	01 MONTH	19 DAY	07 YEAR
SCALE: 1" = 2000'	DRAWN BY: C.P.	REV: 09-17-07 C.C.	C TOPO



APPROXIMATE TOTAL PIPELINE DISTANCE = 1,662' +/-

LEGEND:

PROPOSED ACCESS ROAD
EXISTING PIPELINE
PROPOSED PIPELINE

N

QUESTAR EXPLR. & PROD.

RW #23-32BD
SECTION 32, T7S, R23E, S.L.B.&M.
2131' FSL 1751' FWL

Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC MAP	01 MONTH	19 DAY	07 YEAR	D TOPO
SCALE: 1" = 1000'	DRAWN BY: C.P.	REV: 09-17-07 C.C.		

FORM 9

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

CONFIDENTIAL

5. LEASE DESIGNATION AND SERIAL NUMBER: UTO-02025-ST

SUNDRY NOTICES AND REPORTS ON WELLS

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

7. UNIT or CA AGREEMENT NAME: RED WASH UNIT

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ OTHER

8. WELL NAME and NUMBER: RW 23-32BD

2. NAME OF OPERATOR: QUESTAR EXPLORATION & PRODUCTION CO.

9. API NUMBER: 4304739182

3. ADDRESS OF OPERATOR: 11002 E. 17500 S. CITY VERNAL STATE UT ZIP 84078

PHONE NUMBER: (435) 781-4301

10. FIELD AND POOL, OR WILDCAT: RED WASH

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 2131' FSL 1751' FWL

COUNTY: UINTAH

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESW 32 7S 23E

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☑ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start:	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☑ OTHER: APD EXTENSION
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Questar Exploration & Production Co. hereby requests a 1 year extension on the RW 23-32BD.

Approved by the
Utah Division of
Oil, Gas and Mining

Date: 09-16-08

By:

NAME (PLEASE PRINT) Laura Bills TITLE Associate Regulatory Affairs Analyst

SIGNATURE Laura Bills DATE 9/11/2008

(This space for State use only)

COPY SENT TO OPERATOR

Date: 9.17.2008

Initials: KS

RECEIVED CONFIDENTIAL
SEP 15 2008
DIV. OF OIL, GAS & MINING

(5/2000) (See Instructions on Reverse Side)

[redacted]

Application for Permit to Drill
Request for Permit Extension
Validation
(this form should accompany the Sundry Notice requesting permit extension)

API: 43-047-39182
Well Name: RW 23-32BD
Location: 2131' FSL 1751' FWL, NESW, SEC. 32, T7S, R23E
Company Permit Issued to: QUESTAR EXPLORATION & PRODUCTION C
Date Original Permit Issued: 9/17/2008 ~1

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision.

Following is a checklist of some items related to the application, which should be verified.

If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes☐No☑

Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes☐No☑

Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes☐No☑

Have there been any changes to the access route including ownership, or right-of-way, which could affect the proposed location? Yes☐No☑

Has the approved source of water for drilling changed? Yes☐No☑

Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes☐No☑

Is bonding still in place, which covers this proposed well? Yes☑No☐

Signature

9/11/2008
Date

Title: Associate Regulatory Affairs Analyst

Representing: Questar Exploration & Production Co.

RECEIVED
SEP 15 2008
DIV. OF OIL, GAS & MINING

API Well No: 43047391820000

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: UTO-02025-ST

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: RED WASH

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: RW 23-32BD

2. NAME OF OPERATOR: QUESTAR EXPLORATION & PRODUCTION CO

9. API NUMBER: 43047391820000

3. ADDRESS OF OPERATOR: 11002 East 17500 South , Vernal, UT, 84078 **PHONE NUMBER:** 435 781-4362 Ext

9. FIELD and POOL or WILDCAT: UNDESIGNATED

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 2131 FSL 1751 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESW Section: 32 Township: 07.0S Range: 23.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 9/17/2010	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
☐ SPUD REPORT Date of Spud:	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	✓ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Questar Exploration and Production Company hereby requests a one year extension for the APD on the above captioned well.

Approved by the Utah Division of Oil, Gas and Mining

Date: September 09, 2009

By: Dustin Doucet

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Jan Nelson	435 781-4331	Permit Agent
SIGNATURE N/A		**DATE** 9/8/2009

RECEIVED September 08, 2009

The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047391820000

API: 43047391820000
Well Name: RW 23-32BD
Location: 2131 FSL 1751 FWL QTR NESW SEC 32 TWNP 070S RNG 230E MER S
Company Permit Issued to: QUESTAR EXPLORATION & PRODUCTION CO
Date Original Permit Issued: 9/17/2007

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- **If located on private land, has the ownership changed, if so, has the surface agreement been updated?** ○ **Yes** ◉ **No**
- **Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?** ○ **Yes** ◉ **No**
- **Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?** ○ **Yes** ◉ **No**
- **Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location?** ○ **Yes** ◉ **No**
- **Has the approved source of water for drilling changed?** ○ **Yes** ◉ **No**
- **Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?** ○ **Yes** ◉ **No**
- **Is bonding still in place, which covers this proposed well?** ◉ **Yes** ○ **No**

Approved by the Utah Division of Oil, Gas and Mining

Signature: Jan Nelson **Date:** 9/8/2009
Title: Permit Agent **Representing:** QUESTAR EXPLORATION & PRODUCTION CO

Date: September 09, 2009
By:

RECEIVED September 08, 2009

Division of Oil, Gas and Mining

OPERATOR CHANGE WORKSHEET (for state use only)

ROUTING
CDW

Change of Operator (Well Sold) **X - Operator Name Change**

The operator of the well(s) listed below has changed, effective: **6/14/2010**

FROM: (Old Operator):	**TO:** (New Operator):
N5085-Questar Exploration and Production Company 1050 17th St, Suite 500 Denver, CO 80265 Phone: 1 (303) 308-3048	N3700-QEP Energy Company 1050 17th St, Suite 500 Denver, CO 80265 Phone: 1 (303) 308-3048

CA No. **Unit:** **RED WASH**

WELL NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
SEE ATTACHED								

OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

1. (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 6/28/2010
2. (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 6/28/2010
3. The new company was checked on the **Department of Commerce, Division of Corporations Database on:** 6/24/2010
4a. Is the new operator registered in the State of Utah: Business Number: 764611-0143
5a. (R649-9-2)Waste Management Plan has been received on: Requested
5b. Inspections of LA PA state/fee well sites complete on: n/a
5c. Reports current for Production/Disposition & Sundries on: ok
6. **Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM 8/16/2010 BIA not yet
7. **Federal and Indian Units:**
   The BLM or BIA has approved the successor of unit operator for wells listed on: 8/16/2010
8. **Federal and Indian Communization Agreements ("CA"):**
   The BLM or BIA has approved the operator for all wells listed within a CA on: N/A
9. **Underground Injection Control ("UIC")** Division has approved UIC Form 5 Transfer of Authority to **Inject,** for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: 6/29/2010

DATA ENTRY:

1. Changes entered in the **Oil and Gas Database on:** 6/30/2010
2. Changes have been entered on the **Monthly Operator Change Spread Sheet on:** 6/30/2010
3. Bond information entered in RBDMS on: 6/30/2010
4. Fee/State wells attached to bond in RBDMS on: 6/30/2010
5. Injection Projects to new operator in RBDMS on: 6/30/2010
6. Receipt of Acceptance of Drilling Procedures for APD/New on: n/a

BOND VERIFICATION:

1. Federal well(s) covered by Bond Number: ESB000024
2. Indian well(s) covered by Bond Number: 965010693
3a. (R649-3-1) The **NEW** operator of any state/fee well(s) listed covered by Bond Number 965010695
3b. The **FORMER** operator has requested a release of liability from their bond on: n/a

LEASE INTEREST OWNER NOTIFICATION:

4. (R649-2-10) The **NEW** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: n/a

COMMENTS:

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER:	See attached
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	See attached
7. UNIT or CA AGREEMENT NAME:	See attached
8. WELL NAME and NUMBER:	See attached
9. API NUMBER:	Attached
10. FIELD AND POOL, OR WILDCAT:	See attached

1 TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ OTHER

2 NAME OF OPERATOR: Questar Exploration and Production Company N5085

3 ADDRESS OF OPERATOR: 1050 17th Street, Suite 500 CITY Denver STATE CO ZIP 80265 PHONE NUMBER: (303) 672-6900

4 LOCATION OF WELL

FOOTAGES AT SURFACE: See attached COUNTY: Attached

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: STATE: UTAH

11 CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☑ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start: 6/14/2010	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☑ OTHER: Operator Name Change
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12 DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Effective June 14, 2010 Questar Exploration and Production Company changed its name to QEP Energy Company. This name change involves only an internal corporate name change and no third party change of operator is involved. The same employees will continue to be responsible for operations of the properties described on the attached list. All operations will continue to be covered by bond numbers:

Federal Bond Number: 965002976 (BLM Reference No. ESB000024) N3700

Utah State Bond Number: ~~965003033~~ 965010695

Fee Land Bond Number: ~~965003033~~ 965010695

BIA Bond Number: ~~799446~~ 965010693

The attached document is an all inclusive list of the wells operated by Questar Exploration and Production Company. As of June 14, 2010 QEP Energy Company assumes all rights, duties and obligations as operator of the properties as described on the list

NAME (PLEASE PRINT) Morgan Anderson TITLE Regulatory Affairs Analyst

SIGNATURE Morgan Anderson DATE 6/23/2010

(This space for State use only)

RECEIVED
JUN 2 8 2010
DIV. OF OIL, GAS & MINING

APPROVED 6/30/2009
Earlene Russell
Division of Oil, Gas and Mining
Earlene Russell, Engineering Technician

(5/2000) (See Instructions on Reverse Side)

Questar Exploration Production Company (N5085) to QEP Energy Company (N3700)
RED WASH
effective June 14, 2010

well_name	sec	twp	rng	api	entity	mineral lease	type	stat	C
RW 12-16B	16	070S	230E	4304715177	5670	State	OW	P	
RW 41-16B	16	070S	230E	4304715292	5670	State	OW	P	
RW 14-16B	16	070S	230E	4304732785	5670	State	OW	P	
RW 34-16B	16	070S	230E	4304732786	5670	State	OW	P	
RW 23-16B	16	070S	230E	4304733084	5670	State	D	PA	
RWU 21W-36A	36	070S	220E	4304733730		State	GW	LA	
RWU 21G-36A	36	070S	220E	4304733731		State	OW	LA	
RWU 41-36A	36	070S	220E	4304733732		State	OW	LA	
RWU 43-16B	16	070S	230E	4304733733		State	OW	LA	
RWU 21-16B	16	070S	230E	4304733734		State	OW	LA	
RWU 11-36A	36	070S	220E	4304733736		State	OW	LA	
RWU 13-36A	36	070S	220E	4304733737		State	OW	LA	
RW 32G-16C	16	070S	240E	4304735238	5670	State	GW	P	
RW 14-36AMU	36	070S	220E	4304736721		State	GW	LA	
RW 01-36BG	36	070S	230E	4304736887	5670	State	OW	P	
RW 24-16BG	16	070S	230E	4304737746	5670	State	OW	P	
RW 12-32BG	32	070S	230E	4304737946	15841	State	GW	P	
RW 23-32BD	32	070S	230E	4304739182		State	GW	APD	C
RW 21-32BW	32	070S	230E	4304739183		State	GW	APD	C

Bonds: BLM = ESB000024
BIA = 956010693
State = 965010695

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Utah State Office
P.O. Box 45155
Salt Lake City, UT 84145-0155
http://www.blm.gov/ut/st/en.html

IN REPLY REFER TO:
3100
(UT-922)

JUL 2 8 2010

Memorandum

To: Vernal Field Office, Price Field Office, Moab Field Office

From: Chief, Branch of Minerals Roger L Bankert

Subject: Name Change Recognized

Attached is a copy of the Certificate of Name Change issued by the Texas Secretary of State and a decision letter recognizing the name change from the Eastern States Office. We have updated our records to reflect the name change in the attached list of leases.

The name change from **Questar Exploration and Production Company** into **QEP Energy Company** is effective June 8, 2010.

cc: MMS
UDOGM

GARY R. HERBERT
Governor
GREGORY S. BELL
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Oil, Gas and Mining
JOHN R. BAZA
Division Director

September 21, 2010

Questar Exploration & Production Co.
11002 East 17500 South
Vernal, UT 84078

Re: APD Rescinded – RW 23-32BD, Sec. 32, T.7S, R.23E,
Uintah County, Utah API No. 43-047-39182

Ladies and Gentlemen:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on September 17, 2007. On September 16, 2008 and September 9, 2009 the Division granted a one-year APD extension. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective September 21, 2010.

A new APD must be filed with this office for approval prior to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

Diana Mason
Environmental Scientist

cc: Well File
SITLA, Ed Bonner

1594 West North Temple, Suite 1210, PO Box 145801, Salt Lake City, UT 84114 -5801
telephone (801) 538-5340 • facsimile (801) 359-3940 • TTY (801) 538-7458 • *www.ogm.utah.gov*

UTAH DNR OIL, GAS & MINING